American Bee Journal

JULY, 1951



NO. 7

The Eyes Have It

HONEY, dat's all!



Yes sir, the eyes have it, when it comes to buying honey. When your jar, can, pail or section carries a Dadant honey label, you catch the buyer's eye at once. Just put good quality honey behind the label and the sale is well on the way. Dadant Labels are in many colors and styles to suit any package. Our catalog has all of them, each one just as you need it to paste right on your container and see how it looks. A copy of our label catalog with all styles and colors of labels is yours for the asking. Send for yours today.

If you pack wrapped bulk comb honey and want some new, bright, attractive cartons, we have some that will surprise you. Two sizes, small and large. Glad to send samples and prices on request.

Our new fall price list is about ready. Send your name and address for a copy. All kinds of containers and helps for selling honey. All kinds of equipment for handling honey from hive to store.

Dealers Everywhere

Dadant & Sons, Inc., Hamilton, Ill. - - - Paris, Texas





The Cover Winner

Mrs. Grover Turner

Delta, Colorado

As we resume our cover contest, the winner this month comes from western Colorado. Mrs. Turner, mother of the two little girls on the cover, writes us about her family:

"After spending two years with the Army on Luzon, Grover, who had worked with bees, decided to locate on the western slope of Colorado. We have a country home two miles from Delta, and beekeeping and packing honey are a full time job. We live in the shadow of Grand Mesa, highest flat top mountain (10,500 feet) with over 600 lakes. We use the slogan 'Packed in the Shadow of Grand Mesa' on our honey labels.

"There are no young men beekeepers in the Turner family, but four very enthusiastic girl beekeepers who aren't afraid of the bees or the work. And do they love the finished product, as the picture shows!"

Mr. Turner makes many deliveries of honey with his Stinson plane, shown above. He says the bees bring it in on the wing and he delivers it the same way. He also checks his bee yards by plane (one of his yards near Gunnison is shown above) and can spot a lid off from the air. The Turner family likes to take time off occasionally to fish and in the fall Grover gets his deer and elk that he has spotted during the summer.

Cover Contest-Why not try your luck? We will not use more than two cover pictures from any one person. Each month the award for the winner is \$10. Any pictures not accepted for the cover may however be used for other pages; or returned. Send glossy prints, 5 x 7 or larger. Try for pictures of unusual interest.

NEWTON BEE CO. Route 2, Baton Rouge, La.

Serving the discriminating pur-chasers of package bees and queens for almost a quarter of a century. Service, Quality and Satisfaction our motto.

We offer Dadant's Starline Hybrid queens or our old line of reliable Pat. Off.

All orders, large or small, get the same conscientious consideration.

PACKAGE BEES - QUEENS Italian Caucasian

queen of Merit in each package

THE COPPEY APIABLES
Whitsett, Texas

LIGHT ITALIAN QUEENS

70c each; 50 up 65c each 2-lb. bees, \$2.50 3-lb., \$3.50 4-lb., \$4.25 5-lb., \$4.75

For Queenless Packages Deduct Price of Queen.

Add 75c per Pkg. if wanted via parcel post Prepaid, or \$1.00 if in Canada.

B. A. ANDERSON & CO. Opp, Alabama

HONEY WANTED

3-BANDED ITALIAN

W. E. PLANT Hattiesburg, Mississippl

HOLLOPETER'S QUEENS

Hardy, Eusting, Honey Cathering
Reared on top of the Allegheny
Mountains and bees winter on summer stands without packing.
QUEENS — B.00 each
Quantity prices on request.
Good stock, prompt service.

WHITE PINE BEE FARMS

FREE.

A Sample Copy

"Gleanings in Bee Culture" LOOK IT OVER

YOU WILL LIKE IT A. I. BOOT CO., Medina, Ohio QUEENS FROM THE WONDER STATE ITALIANS - \$1.00 each

Dadant Starline Hybrids
The bees of tomorrow
that you can have TODAY
\$1.25 each 100—\$100.00
Reared in large nuclei,
well developed.

THEY PLEASE

S. J. HEAD Crossett, Arkansas

"Honey in the Comb"

By Carl E. Killion

Have you ordered your copy of this book? Do not delay! Order now and prepare to produce the kind of honey the public wants. Honey in the comb finds a ready market. It is the finest quality that gets the premium price. This book should help you produce that kind of honey.

Price of the book is \$3 postpaid.

Killion & Sons Apiaries

CONTAINERS

A Complete Line— Priced Right TIN

5 and 10-lb. Friction Top 5-Gal. Square Cans

GLASS

Modern or Plain 1/2, 1, 2, 3, 5-lb.

COMB HONEY

Cartons

Cellophane Wrappers Shipping Cases

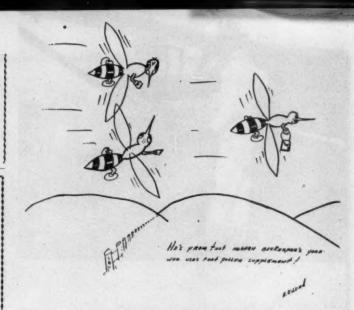
. . .

The A. I. Root Company of IOWA COUNCIL BLUFFS, IOWA

HIGH QUALITY ITALIAN QUEENS BY AIR MAIL

75c each 10 or more, 65c each It pays to requeen with good queens.

CARLUS T. HARPER



This Month

Editorial 278, 281, 283, 294, 295,	297
The Cover Winner	27
What's Going On	27
Bees and Wild Flowers—August P. Beilmann	280
Producing More Beeswax-Roy A. Grout	28
The Use of Honey in Maintaining the Efficiency of the Business Executive—D. C. Jarvis, M.D.	284
European Foulbrood—Joseph O. Moffett	280
Queen Introduction—Elmer G. Carr	28
A Civilization of Honey—Dr. E. F. Phillips	28
Tomatoes, Pianos, Clothes, Hats and Honey-Arthur W. Kehl	29
Magic in Honey?—Alice Wagner	29:
Breeding Improved Honey Bees-William C. Roberts and Otto Mackensen	293
A Case of Sabotage—H. J. Rahmlow	29
Rosemary Honey—Pascal Le Clerq	29
New Results in Vetch Seed Tests-A. B. Kennerly	298
This Is the Month-Frank E. McLaughlin	308
All Around the Bee Yard-G. H. Cale	30
Market News-M. G. Dadant	31

Volume 91, No. 7

July, 1951

THE AMERICAN BEE JOURNAL

HAMILTON, ILLINOIS

Editor—G. H. Cale Associate Editors — M. G. Dadant, Roy A. Grout Managing Editor—Adelaide Fraser

Published monthly at Hamilton, Illinois. Entered as second class matter at the Post Office Hamilton, Illinois: In the United States, Canada and Mexico, \$2.00 a year; \$4.00; three years \$4.00; Foreign \$2.50 a year; two years \$4.00; three years \$5.50. Subscription stopped at expiration date printed on wrapper.

What's Going On

Correction

The Langstroth memorial program to be held at South Church in Andover, Massachusetts will be on Sunday, July 22. The June issue of ABJ gave the date incorrectly.

It is hoped that as many beekeepers as possible will be able to attend this fine program. Contributions can still be sent to Wallace R. Parker, West Boylston, Mass., or to F. R. Shaw, University of Mass., Amherst.

North Carolina Summer Meeting Cullowhee, August 10-11

The North Carolina Beekeepers' Association is combining vacation entertainment with business at the Summer meeting at Cullowhee, N. C., August 10-11. Beekeepers will bring their families and see the famous Cherokee Indian Drama "Unto These Hills."

Rooms will be available in the dormitories of the Western Carolina Teachers' College from August 9-13, with linens furnished, at the rate of \$1.00 per day per person. Meals will be furnished at 75c each. For reservations write W. A. Stephen, Extension Beekeeper, N. C. State College, Raleigh, N. C., by July 31.

Mr. Stephen and Mr. P. J. Gibson, county agent are arranging excellent programs in cooperation with local beekeeping clubs. There will be well known out-of-state speakers, contests will be held and prizes awarded. Bring smokers and veils, as inspection of colonies (including disease) will be made.

Eugene B. Finch, Sec'y

Marion County Beekeepers Assoc. Marion, Ohio, July 8

There will be a field day and picnic on July 8 at 1 p. m. in Garfield Park, east end of Marion, Ohio, on Route 30—S.

Bessie Wendling, Sec'y

Iowa-Nebraska Joint Meeting Council Bluffs, July 14

Speakers for the afternoon portion of this meeting are as follows:

John Tideswell—Legume Pollination

Glenn O. Jones—American Beekeeping Federation Today Mrs. Harriet Grace—Your Ameri-

Mrs. Harriet Grace—Your American Honey Institute

Edward A. Wolfe — Marketing Your Produce

Allen Root - Washington, D. C., and Beekeeping

Other details of the day's events were given in June ABJ.

R. J. Walstrom Iowa State College

Beekeeping Short Course

The Beekeeping Short Course will be conducted at the Pennsylvania State College, August 20 to 24, 1951, and will have a full program both in lecture work and management in the apiary.

Emphasis will be given to spring management, swarm control, queen rearing, and the marketing of honey.

There are six College apiaries, with a total of 140 colonies of bees and 100 queen mating hives, for the students to work with. The laboratory contains the latest in commercial and back lot extracting equipment.

The teaching force will include George Rea, W. W. Clark, and Edwin J. Anderson.

For further information, write to A. Leland Beam, Director of Short Courses, School of Agriculture, State College, Penna.

> Northwestern Pennsylvania Beekeepers

Canadota Lake, July 25

The Northwestern Pennsylvania Beekeepers will hold their annual picnic at Canadota Lake, Pa., on Wednesday, July 25 at noon.

Mrs. Eva M. Moore, Sec'y Crawford Co. Beekeepers' Assn.

PROGRAM Beckeepers Summer Agricultural Conference

> Purdue University Tuesday, July 31, 1951

8:30-10:45 C.S.T. (9:30-11:45 D.S.T.):
Room 207, Agricultural Building,
Walter Bielfield, Terre Haute,
President of Indiana State Beekeepers Association presiding.
"The Use of Legumes in Indiana
Agriculture"—M. O. Pence, Purdue. "The Red Clover Pollination
Project"—R. T. Everly, Purdue.
"The Honey Market and the National Economy"—E. C. Martin,
Michigan State College.

11:00-12:30 C.S.T. (12:00-1.30 D.S.T.):
Purdue Agronomy Farm, Rd. 52.
Picnic Dinner for Beekeepers,
their families and friends. (Everyone to bring his own picnic lunch.)

12:45-3:30 C.S.T. (1:45-4:30 D.S.T.):
Furdue Apiary, Agronomy Farm,
Gilbert Perigo, Indianapolis, Indiana Chief Apiary Inspector, presiding. "The Requirements for Successful Wintering"—E. C. Martin,
Michigan State College. "The Purdue Honey and Pollen Plant Garden" — B. Elwood Montgomery,
Purdue.

Demonstrations of examining and handling bees (examination for disease, determing strength of colonies, etc.), Indiana Deputy Bee Inspectors.

Middlesex County Beekeepers' Assoc. Westford, Mass., July 28

The next regular outdoor meeting of the association will be held at the farm and apiaries of member Charles Helmboldt at Westford, Mass., on July 28 at 2 P.M. The "club hive" will be inspected for progress at this meeting. The association will also make a special good will visit on July 14 at the summer home at York Beach, Maine, of Professor Robert Cheney who was chairman of the bee exhibit this spring at the Horticultural Society Flower Show. A special Silver Medal Award was given the association at this show for the display of Italian honey bees. John H. Furber, Sec'y.

Berks County Beekeepers' Assoc. Leesport, Pa., August 4

Berks County association will hold its picnic and summer meeting on Saturday, August 4 at 1:30 P.M. at the roadstand of the Ontelaunee Orchards on the Pottsbille Pike, onehalf mile from Leesport, Pa.

Games, refreshments and that Berks famous Honey ice cream will be enjoyed by all.

Henry F. Phillips, Sec'y.

Annual Summer Meeting · Wisconsin Beekeepers' Assoc. July 24-25

The annual summer meeting of the Wisconsin association will be as follows: At West Bend, Wis., just northwest of Milwaukee, on Tuesday, July 24, and at Ladysmith in northwestern Wisconsin, on Wednesday, July 25.

H. J. Rahmlow, Sec'y. (Please turn to Page 309)

New Gift Pack



Looking for a "GIFT" item that will put honey in the hands of new users and continue to remind them of honey throughout the year?

This new ceramic container is a "honey."

It's not too good for liquid honey except in hand-to-hand sales, can't be easily sealed. But for candied, creamed or whipped honey it's a natural. Will stand shipment, too, with the careful packing that is necessary for all pottery.

It holds a pound of honey. The color is prairie green with an overcast of desert gold.

The design and the mold were paid for by the American Beekeeping Federation and it is available to members at the very reasonable price of \$6.50 per dozen, in multiples of a dozen, orders to be sent to the Federation office at Atlantic, Iowa, and shipment will be from the factory, f.o.b.

"Gift" business is "big" business. Fill this jar with your fine honey, dress it up a bit with tinsel and ribbons and you have a gift that belongs with others at \$2.50 or more. Or, combine it with liquid and comb honey, perhaps add some beeswax candles, and you have a "gift pack" that will really have a sweet appeal.

Time is short. Orders must be placed by mid-July.

More Beeswax

A summary of the 1950 honey and beeswax season has been issued recently by the Production and Marketing Administration of the Department of Agriculture. It varies little from preliminary reports reviewed in this publication.

According to the records, one pound of beeswax is produced in this country for each fifty pounds of honey. So with a total of some 233 million pounds of honey last year, the beeswax production amounted to nearly four and a quarter million pounds.

In our extracting operations we have always found that beeswax from cappings amounted to about 12 to 15 pounds for each 1,000 pounds of honey, depending on the amount of capped honey and also to some extent on how thick cappings were cut. Some beekeepers regularly practice slicing the cappings as thickly as possible to get maximum wax returns. They argue that there is a cer-

tain amount of involuntary secretion of beeswax by the bees in a heavy honeyflow. We are not so sure that this amounts to a great deal, but certainly with the present scarcity and price of wax we are justified in "cutting deep" when uncapping.

Even in our advanced state of beekeeping, however we think one would be surprised at the large amounts of beeswax still being lost through improper methods of salvaging both from cappings and from combs.

While North American beekeeping has certainly advanced above the desultory methods mentioned elsewhere by Dr. Eckert, as in Hawaii where melters are unknown and solars dispose of cappings and combs while the refuse is thrown out, still we have a lot to learn in beeswax saving as a small solar for scraps and broken pieces of comb would soon prove.



National Farm Safety Week July 22 - 28 . . .

The National Safety Council, the U. S. Department of Agriculture and other interested organizations are observing the eighth annual National Farm Safety Week, July 22 to 28 this year. Its purpose is to persuade each member of every farm family to adopt safe practices. Farm accidents now kill an average of 47 farm people every day. It is hoped that the adoption of safe practices will lower this figure, especially in view of our increased need for farm manpower.

Here are 12 good farm safety practices which beekeepers too, would be wise to follow:

Keep machines in good repair and use them carefully.

Operate tractors safely.

Use the right tools for the job. Watch your step to prevent falls.

Speak to animals when approaching them.

Know and obey all traffic laws. Be "firesighted."

Be a good housekeeper.

Apply first aid promptly.

Treat guns as if they were loaded. Know and observe water safety rules.

Know and observe all other farm safety rules.

Japanese Bee Book . . .

Prof. Tanji Inoul of Tokyo University Forest is the author of "The Life of the Honeybee." It is a 60-page book of reference and scientific elementary education on the honeybee. We are sorry that our lack of knowledge of the language prohibits more thorough study of this book.

Heavy Irish Losses . . .

The Irish Beekeeper reports at least 50% loss of colonies in Ireland during the winter just past. This is a record low of remaining colonies for this country. Filling up of all empty equipment during the 1951 season is recommended.

Scottish Editor to Ireland . .

R. N. Skilling, editor of the Scottish Beekeeper, is to be guest conductor of the summer courses for beekeeping to be given at Wexford, Ireland, August 20 to 24.





AN ADEQUATE SUPPLY OF

Dadant's Wired Foundation

will assure you fine combs. You are protected too when you know it is made of pure beeswax.

DADANT & SONS, Inc., Manufacturers

Hamilton, Illinois

Renew Your Subscription Now To A-B-J

Bees and Wild Flowers

by August P. Beilmann*



A portable pollinating unit — to be moved about the Arboretum whenever necessary.

EN have been interested in the economic and ornamental uses of plants long before the time of Linnaeus, who founded the present system of plant classification. But in keeping with the trend toward specialization, we now have societies devoted to the culture of roses, gladioli, cacti, ferns, and almost every group of ornamental plants, and even some organizations interested in wild flowers alone. The ecologists who study the distribution of plants and their relationship to one another can often demonstrate the preference of one species for a particular soil, site, or exposure. They tell us exactly where a wild flower should be found. Most of the wild flowers have their cyclic ups and downs. Some species are abundant in seasons of ample rain and they almost disappear during a drought cycle. Then, too, an adequate amount of rain at the wrong time may stimulate their competitors at their expense. Generally, these variations in population are considered to be due largely to the weather and its effect on the environment; it is

taken for granted that ample amounts of seed were produced for the coming year.

The role of the pollinators in the cyclic rise and fall of wild flowers has not been emphasized. The annuals, especially, must be completely pollinated to produce adequate amounts of seed. Most plantsmen have an academic knowledge of the bee as a pollinator, but very few plant enthusiasts appreciate the close connection between bees and the seed crop of wild flowers. Even the perennial species do not live forever, and new seedlings must be developing constantly if the species is to maintain its prominence. Needless to say, the annuals can perpetuate themselves and spread to joining areas only when an adequate amount of seed is produced.

Beekeepers need hardly be told of the importance of the bee as a pollinator in the face of the effort of the Federal Government to increase the production of legume seeds. Nor should it be necessary to point out that recent thinking places the pollination activities of the bee above the value of his efforts in the production of honey and wax. Some serious effort is being made to obtain aid from the Federal Government to compensate the beekeeper for the pollinating work done by his bees. That equal importance should be attached to the activity of the bee in relationship to wild flowers is not at all appreciated.

We have observed some of the practical benefits of complete pollination in Hidden Valley and in the Arboretum - both are wild flower areas under our control. Hidden Valley is noted for its massive display of uncommon wild flowers. Without examining the area critically as to soil, exposure, and the other factors which have a bearing on wild flowers, one notable feature of the tract has always been the great number of domestic bees which were present. Under those conditions, in a good season, every open flower was pollinated, and seed production was at its maximum. Beginning with the earliest plant to bloom, such as the false rue anemone (Isopyrun biternatum), on through the many midseason species, and continuing into goldenrod time every flower which yielded nectar, or pollen was visited by bees. In the ab-

Manager, The Arboretum, Missouri Botanical Garden Gray Summit, Missouri

sence of beekeepers in that area it was difficult to account for the many bees in the tract. While salvaging some blown down trees following a tornado it was discovered that there was at least one "bee tree" to each twelve acres in the tract. Due to the gigantic size of the trees and the limited time available, it was not possible to learn the exact number of escaped colonies. But in the course of the winter enough evidence was found to indicate that swarms had holed up in at least twelve trees. The excellence of the wild flowers in this small valley can not be charged to the presence of the bees alone. The valley has been almost undisturbed and the fertility level is high. But if all the pollinators were taken from the area many species would decline, and the wonderful floral display might disappear.

In the Arboretum more than one "bee tree" per five hundred acres can rarely be found. This is due in part to the type of timber, its management, and age. On the whole, there are few trees present which would provide housing for an absconding swarm. During the last eight years a sixteen colony bee yard has been maintained, and during that time some very notable increases in some plants have been observed. When the bees were first brought to the Arboretum, white clover (Trifolium repens) was a rare plant confined to the new road shoulders. Miami mist (Phacelia sp.) was represented by several small colonies a yard or so in diameter, and during some years it appeared that spring beauty (Claytonia sp.) was declining. This, in part, was attributed to the greater duff cover on the slopes on which it grew. In the same fashion the rise and fall of certain other wild flowers has been credited in most cases to 'good" or "bad" weather. That the bee played a part in this annual display is becoming more evident each year. For instance, the clovers are now widely distributed; Miami mist patches cover thousands of square feet and the number of bees visiting spring beauty has apparently aided its spread and replanting.

These two observations do not mean that bees are solely responsible for the distribution of any plant. But it does indicate that wild flowers will increase and spread if adequate seed production occurs. The actual agency involved in the distribution of the seed might be difficult to de-Cattle certainly spread termine. clover, birds are fond of other seeds, and even deer may be important seed carriers. No matter what agency may be responsible for the scattering of seed, it is absolutely essential that an annual produce seed or disappear. Even perennial plants have a definite life span, and reseeding is needed to keep a crop of young plants.

The pollination problem when applied to wild flowers and even many forest trees appears quite complex and takes on some of the characteristics of an endless circle. There are many gaps in our knowledge but without adequate seed production the wild flowers disappear. Modern agriculture and logging have so complicated the housing situation that

there are fewer and fewer bee trees and less and less ground space for the bumble bee and the other native pollinators. Many of the wild flowers are insect pollinated, but we know very little about the effect of soil fertility on nectar production. A rise in the fertility level may favor the production on an attractive nectar, and this in turn would insure a good seed set. Thus the wild flower, instead of disappearing, will increase annually if bees are present.

To investigate further the role of the bee as a pollinator of wild flowers, six strong colonies were loaded on a farm wagon in February and moved to an area where their performance could be observed. This sort of migratory beekeeping is possible in the 1700 acres of the Arboretum. Although this is the first time a "portable pollinating unit" was set up for this purpose, it has long been the practice to depend on bees for the pollination of species and varieties of boxwood. there will not be time to demonstrate statistically how important the bee might be in the maintenance of a wild flower display, we believe this procedure, if followed for even one year, should show some marked effect in this reservation. Observations during the past spring would seem to show the need of a working agreement between wild flower enthusiasts and beekeepers. We know that the set of seed by redbud is proportional to the distance from a bee yard; and a heavy crop of seed on a wild redbud is proof that a "bee tree" is not far away. How many more wild flowers behave in the same fashion?

The Bee Is the Quail's Best Friend

"In every state there is a group who is interested in establishing the same plants that are beneficial to honey bees—the state conservation commission," stated August P. Beilmann, manager of The Arboretum of the Missouri Botanical Gardens. He explained that through experimental plantings in cooperation with the Soil Conservation Service, they had found that the same plants that are good food sources for quail and other birds, were good for bees as sources of nectar and pollen. Inasmuch as honey bees pollinate these plants while collecting their food, Dr. Beilmann also says, "The honey bee is the quail's best friend."

Here is an untapped reservoir of help for the beekeeping industry. These conservation groups are interested in establishing many plants which are beneficial to quail and other game, and certainly the Soil Conservation Service is interested in plants which are also beneficial to honey bees. It is merely a matter of calling this to their attention and to the attention of sportsmen and other groups who are interested in conserving our wildlife.

Here is a golden opportunity for the beekeeping industry! We urge each and every state beekeepers' association to appoint a committee to contact these groups. Here is a worthy project for your association!

Producing More Beeswax

by Roy A. Grout



ELSEWHERE in this issue of the American Bee Journal appears an editorial carrying the following statement which appeared in the May 25, 1951 issue of The Wall Street Journal under a column entitled "Washington Wire":

"Operation honey bee occupies Agricultural Department apiarians. Officials want beekeepers to increase their colonies and boost beeswax output to eight million pounds yeariy, double the present total. The wax, needed for coating shells and in plane manufacture, can't be made synthetically."

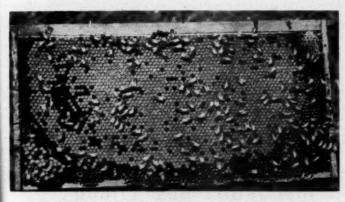
Eight million pounds! Almost twice as much as we produced in 1950! Can it be done? Yes, it can be done, although it is extremely unlikely that it can be accomplished during 1951. The industry must place emphasis on the production of beeswax and on pollination, if it is to be considered essential to our country's programs in the national emergency. Certainly we want to cooperate with our Government by increasing the

production of beeswax. It can be done!

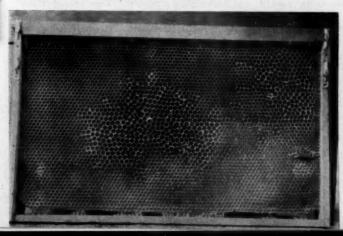
According to figures of the Bureau of Agricultural Economics, we produce annually less than a pound of beeswax per colony. To produce eight million pounds of beeswax we would need to achieve an average production of slightly less than 1½ pounds annually from each colony. Many commercial beekeepers produce this much and more annually per colony. With a good flow, this figure could be obtained from cappings only.

The greatest obstacle to a program for increasing the production of beeswax is getting the word to every beekeeper that more beeswax is needed, along with information as to how to produce and save more beeswax. This requires a tremendous educational and extension pro-Very few beekeepers read the Wall Street Journal; only a limited number take a bee journal. The press and the radio is the only way to reach the great multitude of part-time and hobby beekeepers. For releases of this kind, the industry will have to rely upon the Department of Agriculture. We hope that they will be able to make their releases attractive enough that press and radio will use them frequently.

Sources of increased production of beeswax are old and poor combs, cappings, and bits of beeswax-burr combs, brace combs, and other scraps obtained while working the colonies. In this and subsequent issues, we are going to discuss many phases of producing and saving beeswax in its different forms. Our approaches will be practical onesmethods which are all good beekeeping practices and which we believe can be accomplished without detriment to the colony and without resulting in a reduction of the amount of honey that normally would be stored as surplus.



The above comb is considered a good comb for brood rearing in spite of the small area of drone cells in the lower left-hand corner. The comb below is not a good comb and should be culled at the first opportunity.



Old and Poor Combs

While there has been some scientific evidence that the cells of old

American Bee Journal

combs reduced in size resulting from their use by many generations of worker bees, we are not ready yet to say that a comb is unsuitable just because it is old. Good combs have been in constant use for twenty years and more with no apparent detrimental effect on the colony. But sooner or later, there is a tendency for the amount of drone cells to increase and other factors operate, e.g., gnawing by mice, damage by the bees themselves, sagging, and breakage. And as the combs of the brood nest become unfit for the high production of the worker bees essential to the production of a maximum honey crop, it is a good beekeeping practice to cull these combs.

To increase production of beeswax during the last war period, the culling of combs was urged. Jas. I. Hambleton, Chief of the Division of Bee Culture, had this to say at that time: "The drastic culling of combs will be in itself productive. This should not only result in more beeswax but should give the beekeeper more honey in that he will be using better combs."

The reason why poor and old combs are not culled when they are

found and judged to be detrimental to the colony, is that the beekeeper has falled to prepare in advance a supply of good combs or frames containing full sheets of comb foundation. Consequently because the beekeeper has not planned wisely, the poor combs remain in the hive to plague the colony. So it should be standard practice to have on hand an ample supply of frames containing full sheets of comb foundation, and it is a better plan to draw a sufficient number of good combs each year for replacing poor ones.

The proper time to secure good combs is during the honeyflow, and the best combs are obtained in bodies directly over the brood nest. Under these favorable conditions, the bees will draw the foundation perfectly from wood to wood in both directions. These combs should be extracted carefully for they are most fragile, and they should be stored in a clean, dry place and protected from damage by the wax moth. These combs then are ready for replacing poor combs in the brood nest at any time.

It was pointed out in the June issue of this Journal, that if every

beekeeper would cull two combs from each colony this year, the beeswax obtained from them would amount to upwards to two million pounds. Here is the source of the greatest amount of beeswax in any program to increase its production. If you do not have combs available for doing this during the coming months, perhaps it is not yet too late to draw some combs so that poor combs can be replaced this fall or next spring. But whatever your situation may be, now is the time to start to help in this way to increase our beeswax production.

It should be baidly stated that comb culling is a saily neglected, good beekeeping practice. Good combs are essential for the production of a surplus honey crop; good combs are essential for producing a maximum population of honey bees for pollination. Poor combs are a detriment to the colony and are only good for the melting pot. And by culling them you also will be helping to increase the production of beeswax needed in the national emergency.

When Can We Import for Breeding?

The European bee journals have had many articles lately extolling the qualities of the Carnika (Carniolan) bees, particularly those bred for a long period by Hans Paschetz, one of the foremost breeders in Europe.

This again brings to mind that we here in the United States still are not able to import bees of any race on account of the danger of adding to our adult bee diseases.

Perhaps we do not need these breeds from abroad. Perhaps we shall do better by sticking to those we have and, by selection and hybridization, produce a bee which is far superior to anything yet bred. But, if the danger is not too great, it would seem feasible to add to our foundation stocks some of those from abroad that have proven themselves.

This office frequently gets inquiries as to where to obtain queens of the Caucasian and Carniolan races. Fortunately, the few American breeders of these two races have been zealous in isolation and selection so that these races are still available, though not in their original purity, still as a good representative of the foundation stock from which they were derived. But as time goes on the difficulty of maintaining their purity increases.

We understand that at one of the Ontario experimental stations, both Caucasian and Carniolan races still are being tested under northern conditions.

It is gratifying to have our European friends comment on the high qualities of Italian-American stock. It likewise appears unfortunate that we cannot build also upon the inherent good qualities of the European races and strains. We hope that the Department of Agriculture is weighing carefully the apparent difficulties on account of disease importations, and that they may soon find themselves able to sanction the importation of queens under restricted conditions which will ensure against disease transmission. It seems to the layman that this might be accomplished.

The Use of Honey in Maintaining the Efficiency of the Business Executive

by D. C. Jarvis, M. D.

VERY machine of any importance that may be purchased has with it a book of instructions which enables the purchaser to make simple adjustments when needed. Unfortunately the human machine is not born into this world accompanied by a book of instructions. Instead, Mother Nature has given us instincts which guide us in making adjustments to the human machine.

It is taken for granted that a business executive at times is going to develop the emotions of fear, anger, anxiety, worry, grief, or deep disgust. Under conditions of his business or private life these emotions are likely to break over the threshold and produce body symptoms. These emotions are expressed in the sympathetic division of the autonomic nervous system which is the spender of stored up energy. These emotional states which are manifested in the sympathetic division are characteristically intense and produce marked changes in the body. The desire for food and drink, the relish of taking food and the pleasures of the table are nought in the presence of anger and great anx-

Under conditions of business environment or of private life in which the emotions are aroused and the sympathetic division, the spender of stored up energy, is thrown into increased activity, the adrenal glands are activated and because of the emergency function which they possess, pour into the blood stream adrenin which serves to argment and prolong the activity of the sympathetic division. This leads to strengthening the heart beat, suffusing the blood with sugar, hastening the circulation, opening more widely the air passages to the lungs, and stopping digestion activities. Under primitive conditions this device for adaptation was probably of major importance but nowadays it is probably more detrimental than other-Emergencies in these days most commonly call for self-control and quiet thinking. Nevertheless, the primitive reactions take place with results somewhat comparable to opening the throttle of an idling motor. The effect on the machinery is not wholesome. It would probably be wise when overwrought to use the body as it was intended to be used when organized for an emergency. Instead of committing an assault upon an opponent one could, at least, take a stiff walk around the block. When the body goes on to what I have come to refer to as a combat basis, the physiological changes that suddenly occur are all adapted to the putting forth of supreme muscular and nervous effort. That was what primitive battle consisted of through countless generations - a fierce physical contest of beast with beast and man with man.

There are, of course, many manifestations when the body organizes itself on a combat basis which are present in degree according to the intensity with which such organization takes place. These surface manifestations include contraction of the blood vessels with resulting pallor, the pouring of cold sweat, the stopping of saliva flow, the dilation of the pupils, the rising of the hairs, the rapid beating of the heart, the hurried respiration, the trembling and twitching of the muscles, especially of those about the lips. These surface manifestations are all wellrecognized accompaniments of great emotional disturbances, are mainly superficial, and therefore readily seen. There are other organs hidden deep in the body which do not reveal so obviously the disturbance of action which attends states of intense

Every one of the visceral changes such as the cessation of processes in the digestive tract, the shifting of blood from the abdominal organs to the organs immediately essential to muscular exertion, the increased vigor of contraction of the heart, the discharge of extra blood corpuscles from the spleen, the deeper respiration, the dilation of the bronchioles in the lungs, the quick abolition of muscular fatigue, and the mobilizing of sugar in the circulation, are directly serviceable in making the bodv more effective in the violent display of energy which fear or rage or pain may cause. The whole digestive process which is subject to check by the sympathetic division of the autonomic nervous system may be profoundly deranged by anxiety and distress which are minor aspects of fear. The natural processes of the alimentary canal are fundamental to all other functions of the body. Any disturbance of normal peristalsis and secretion of the digestive fluids may have widespread ill effects in the body.

The cardiovascular system, like the digestive system, is under the influence of the sympathetic division but instead of being depressed or inhibited it is stimulated. The excitement which stops gastric digestion makes the heart beat more rapidly and raises the blood pressure by contracting the blood vessels.

Just as in war between nations the arts and industries which have brought wealth and contentment must suffer serious neglect or be wholly set aside both by the attacker and the attacked, and all the supplies and energies developed in the period of peace must be devoted to the present conflict, so the functions which in quiet times establish and support the bodily reserves are, in times of stress, instantly checked and these reserves lavishly drawn upon to increase power in the attack and defense. Modern business being a conflict between rival organizations, the same reactions are created in the body of the modern business executive as were created in primitive man.

As a result of emotional upsets and prolonged mental work, it is only natural to expect evidences of wear and tear en his human machine if the busy executive does not know how to make simple adjustments from day to day as the need arises. Evidence of wear and tear on him may include the following:

First, he may have difficulty in relaxing at the end of the day, falling asleep at bedtime, and sleeping soundly all night.

Second, there may appear digestive disturbances such as gas formation, heartburn, indigestion, and stomach or intestinal ulcer.

Third, there may appear twitching of the muscles of the eyelids, or the corner of the mouth. Cramps may appear in the muscles of the legs and feet especially in the night. Paralysis of one or more muscles may appear as time passes.

Fourth, circulation troubles may appear. The pulse may begin to skip, the blood pressure to rise and pain in the region of the heart may appear which is referred to as a heart attack.

Fifth, dizziness may appear on change of position from lying down to a standing position or it may be so constant that remaining at home is necessary.

Honey, manufactured by the honey bee, furnishes the modern business executive a valuable agent which will enable him to slow up the wear and tear on his human machine.

Let us first consider the difficulty in relaxing at the end of the day and sleeping soundly at night. This is due to a high blood and tissue phosphorus level and a low calcium level as the result of the day's activities. This high blood and tissue phosphorus level may be lowered by taking honey, and with its lowering comes relaxation and sleep. According to blood studies it requires two and one-half hours before a blood examination shows a lowering of the blood phosphorus level, but the business executive will observe the sedative effect of honey on himself within an hour's time. If a business executive wishes to come through the day's routine without becoming irritable and impatient and to prevent emotions from breaking over the threshold and producing body symptoms he should take honey each day. At breakfast honey may be used to sweeten coffee or cereal or taken direct from the spoon. At least two teaspoonfuls should be used. Two teaspoonfuls of honey should be taken at each meal each

If difficulty in sleeping at night

appears, add three teaspoonfuls of apple cider vinegar to a cup of honey and place it in a wide mouthed bottle or jar that will admit a teaspoon. When preparing for bed at night two teaspoonfuls of this mixture should be taken which should enable a business executive to fall asleep within a half hour after getting into bed. If he should not be asleep at the end of an hour in bed take two more teaspoonfuls of the honey and apple cider vinegar mixture. If at the end of the second hour in bed he should still be awake, take two more teaspoonfuls. Continue each hour until he falls asleep. If it is difficult to sleep during the night take two teaspoonfuls of the mixture. Honey is far superior to the usual "lullaby pills" prescribed to produce sleep and being harmless can be taken indefinitely.

Second, let us consider digestive disturbances. It has been thought that these were local conditions to be treated locally but Vermont folk medicine has developed an approach to the treatment of these conditions which shows that they are a local manifestation of a general disturbance in the chemistry of the body in which the blood and tissue phosphorus level is high and the calcium level low. Blood studies show that honey lowers the blood phosphorus level and raises the calcium level. When this chemical change is brought about, healing takes place. The taking of honey each day by the business executive should prevent the appearance of digestive tract symptoms. Honey is also a mild laxative which is a valuable aid to one whose body activities are limited.

Third, let us consider disturbances of normal muscle behavior. If twitching of the muscles of the eyelids or corners of the mouth occurs, it may be made to disappear by taking two teaspoonfuls of honey each meal. If cramps appear in the muscles of the legs and feet especially during the night two teaspoonfuls of honey each meal will bring about a disappearance of the cramps as long as the taking of the honey each day is continued. The presence of the leg cramps is shown by blood studies to be associated with a high blood phosphorus level and a low blood calcium level. The taking of honey lowers the blood phosphorus level and raises the blood calcium level. When this takes place the leg and foot cramps disappear.

Fourth, let us consider troubles that may appear in the circulation. If a business executive finds his pulse begins to skip so that pulse beats do not come regularly, he should take at least two teaspoonfuls of honey each meal in order to lower the blood and tissue phosphorus level and raise the blood and tissue calcium level. As he succeeds in bringing about this chemical change in his body the skipping of the pulse beats will generally disappear. The time required to bring about this disappearance of the skips in the pulse is from a few days to one month.

The blood pressure, if high, is generally favorably influenced by taking two teaspoonfuls of honey at each meal. First, honey is a body sedative. It will calm down the dominance of the sympathetic division of the autonomic nervous system which when dominant increases the blood pressure by narrowing the blood vessels in the body. Second, honey is a magnet for fluid. When there is a disturbance in the water balance of the body which holds fluid within the body, the taking of honey will restore it.

Now we come to pain in the region of the heart which is generally referred to as a heart attack. One needs to remember that the heart is a muscle and being a muscle it requires sugar in order to do its work. It must be a natural sugar produced in a natural way such as honey represents. Honey contains minerals, vitamins, ensymes and something that produces a sedative effect in the human body.

is the annoying Finally, there symptom of dizziness to be considered which likewise responds to a lowering of the blood and tissue phosphorus levels and a raising of the calcium level. If the dizziness is of a mild nature the taking of honey should be all that is necessary. If the dizziness is severe it may be necessary in addition to taking honey to change the daily food intake as already outlined above and take one kelp tablet and two teaspoonfuls of apple cider vinegar in a glass of water at each meal.

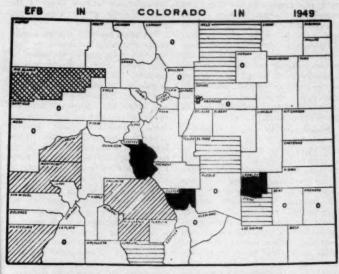
Man is a combat animal and will probably continue to be one. This combat instinct is what makes business competition so attractive to the business executive. He sincerely regards his work as indispensable to the success of the business and redoils from anything that he feels might take him away from his work. Let us not take the business executive away from his work, but show him how to maintain his efficiency.

Vermont

European Foulbrood

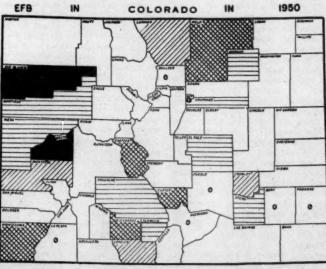
by Joseph O. Moffett*

Over five thousand cases in Colorado in 1950



PERCENT OF COLONIES INFECTED WITH EUROPEAN FOULBROOM





PERCENT OF COLONIES INFECTED WITH EUROPEAN FOULBROOM

O LO

1.0

9.0

10.0

20.0 A

EUROPEAN foulbrood has become an extremely serious problem in many parts of Colorado in the last decade. This disease was of little importance until the early forties. The first outbreak occurred in the San Luis Valley (Rio Grande County) in 1941. This valley has been plagued with EFB in varying degrees of severity and virulence since that time.

European foulbrood definitely seems to be spreading to areas previously free of the disease. Conejos and Delta counties had their first serious infection in 1949, and both counties had a high incidence of EFB again in 1950. Last year, Weld County had the worst loss due to this disease in the history of the county. A few counties have had almost no EFB in the last ten years and are still free of the disease at the present time.

In many cases the recommended methods of control have failed. Italians appear to have little resistance to the disease. Bees bred for resistance to American foulbrood are especially susceptible to EFB, although efforts are being made by their breeders to eliminate this susceptibility. Dequeening and making the colonies strong works in some instances, but at other times it is a dismal failure.

The virulence of the disease varies greatly from year to year and from apiary to apiary. Even the reaction of colonies in the same apiary varies widely. Sometimes over 80% of the affected colonies die, and in other cases most of the diseased colonies recover. Some colonies are reduced to only a handful of bees in a few weeks, while other colonies may have a high per cent of the larvae killed during the spring and summer and still recover from the disease. Sometimes only a few larvae are killed, and the disease does little apparent damage to the colony.

European foulbrood usually occurs in the spring and may spread very rapidly. An entire apiary may become diseased almost overnight. Some beekeeper's kill diseased colonies and melt down the combs. Others store the combs from diseased colonies until the next year and then reuse them.

In an effort to obtain more information about European foulbrood, questionnaires were sent by the Colorado Agricultural Experiment Sta-

^{*} Assistant Entomologist Colorado Agricultural & Mechanical College Fort Collins, Colorado

Queen Introduction

by Elmer G. Carr /

A SIDE from the monetary loss, there is a distressing sense of frustration when a colony of bees refuses a proffered queen.

The "sure" methods of queen introduction are legion and no doubt are sure in the hands of the one who advocates the plan and under the conditions at the time. However, perhaps the person who is in need of a sure method is the less experienced beekeeper. And, while the monetary loss, in his case, may not be great, the disappointment, nevertheless, is keen.

It is possible the queen rearer is as much disappointed over the loss of a queen as is the purchaser. He has used his skill in producing what he believes to be a good queen and dislikes to have his labor go for nought.

Some years ago a queen rearer in one of the middle western states brought out a cage involving the Chantry principle, i.e., the bees in the colony to which the queen was to be introduced, had access to the caged queen before the candy end of the cage was open enough for the queen to emerge. This principle could be used with the usual queen mailing cage by removing the perforated metal, filling that end of the cage with queen cage candy or crushed honey comb and fastening a piece of queen excluding zinc over that end of the cage.

Based on a personal observation, it is the opinion of the writer that the removal of attendants is a large factor in safe introduction, leaving the queen alone in the cage. One way to bring this about is to allow all the bees to escape from the cage before a window, residential or auto, pick up the queen and return her alone. Or what has been termed a wire "muff" can be used for the purpose.

A method which does not involve handling the queen is by using small nails to "pen" the queen in the cage while the attendants emerge. This involves considerable patience since the bees often show an annoying persistence in remaining in the cage when their emergence is desired.

Almost invariably, illustrations and directions for introduction are to put the caged queen between the combs. It is difficult to see good reasons for this procedure and there are those against it.

When the hive contains ten combs, it is next to impossible to place the cage between combs except one be removed temporarily, which must be disposed of in some manner. Then if there is a honeyflow at the time, comb will be built on the bottom of the cage. Further in this procedure, there is no opportunity for the hive bees to get "acquainted" with the queen except through the perforated gate—very small indeed.



A method which obviates all these disadvantages is to place the cage, wire cloth down, lengthwise, over the space between two frames and replace the inner cover, reversed, which gives space for the cage. If one wishes to place the cage between two hive bodies, the same procedure is still possible. The cage will tend to elevate one comb in the upper body but no harm is done.

It is readily seen that the bees have ample opportunity to "get acquainted" with the queen.

A queen caged alone gets hungry and asks for feed. The bees feed her and she is as much theirs as though reared in that hive.

The odor theory is not, in the writer's opinion and experience, a factor. If it were, the fact that a queen can be flicked from a nuc comb into a queenless colony and be accepted would not hold. Also a queen may be caged in a colony for a week and be killed when liberated. Surely she should get the odor in that time if that is a factor.

New Jersey

tion to 130 beekeepers owning 100 or more colonies. Over 60% of the questionnaires were answered and returned. The following information was obtained from them.

The seventy-three beekeepers who reported owned 35,134 colonies. This is 48% of the colonies in Colorado. These beekeepers had 1,515 cases of EFB in 1949 and 2,529 cases in 1950. In 1949 an average of 4.3% of the colonies had EFB, while the percentage of EFB had risen to 7.2% in 1950. If the unreported colonies had the same percentage of disease, there were over 3,000 cases of EFB in Colorado in 1949, and over 5,000

cases in 1950.

The number of colonies lost from this disease tas been high. In 1949 there were 1,515 diseased colonies reported and 891 of these were lost. This is a loss of 59%. The percentage of loss was slightly higher in 1950. Of the 2,529 EFB diseased colonies, 1,605 or 63% were lost.

Some counties were hit very hard by this disease. Over 20% of the total colonies in Deita and Rio Blanco counties were affected with EFB in 1950, while in five other counties over 10% of the colonies had EFB.

The reporting beekeepers estimated their losses at \$16,540 in 1949 and at

\$25,300 in 1950. If the same losses were true for the unreported colonies, the losses due to European foulbrood were over \$33,000 in 1949 and more than \$50,000 in 1950.

European foulbrood appears to be on the increase in Colorado. Over 7% of the total colonies in the state had the disease last year. Reports from New Mexico and Texas indicate EFB is becoming a problem in those states. European foulbrood needs more study and attention in planning research programs than it has received in the last twenty years, particularly if it continues to increase in virulence and prevalence.



A Civilization of Honey

by Dr. E. F. Phillips

HEN one goes on the prowl for bee books, almost anything can happen. In a relatively brief time the names of the more important authors and the titles of their books on bees become rather familiar, and it is always a thrill to find a book or an edition for which one has searched a long time. But new things keep turning up also, and when a book list gives only the author's name and title of the book, some surprises may be in store. A novel entitled "The Honey Bee" turned out to contain a mention of bees on one half page. An entomological journal in France carries the name L'Abeille but rarely deals with bees. A book actually on honey bees may be a juvenile or a series of essays of a serious sort. The title "A Cluster of Bees" deals with solitary bees and is packed with the most delightful essays. From the title alone one cannot be sure whether he is getting a text book or a series of essays on the merits of beekeeping. But of the surprises, the choicest for a long time turned up with the title "Une Civilisation du Miel," which I have translated into the title of this tale.

The word civilization as in common use means the state of being reclaimed from the crudities of savage life and advanced in the arts and learning. Its derivation permits a broader meaning and the word is also used to distinguish the various steps of evolutionary progress through which man has passed from a primitive or savage state to attain

the higher development to which the word is usually applied. As used in this book, civilization does not pertain to any lofty state of human progress but to a more lowly one.

What can a civilization of honey be? Presumably it is one in which honey plays a leading part in the life of a people. To a beekeeper it would seem to imply a civilization much to be envied, one in which we might wish to have a part. In the civilization described in this latest find, honey plays a major part, but none of us would wish to do more than read about it, perhaps briefly to have a look at it, but not to be part of it. It is a civilization of the hunter period of man's evolution, not higher than the upper reaches of savagery.

The author, Dr. Jehan Vellard, a biologist who had worked on snake venom, was given the assignment of studying an Indian tribe in Paraguay, in the Province of Caaguassu, a short distance from the second largest city of that country, Villa Rica. This is a mountainous and plateau country largely in forests, south of the River Monday and along the west side of the River Parana. It is largely still in primitive forests, and in these forests dwells a tribe of Indians known as Guayaki. It is these people who possess the civilization of honey of which the author

The Guayaki Indians are reported to be the most primitive and wiid of the Indian tribes of South America, as well as the most mysterious. They wander constantly from place to place in groups of eight to fifteen, as naked as when born, possessing only the most simple and scanty of tools or implements and keeping no stores of food from day to day except perhaps a little honey. Their origin and relationship to other tribes is obscure, but the author seems to think that they are a degenerate offshoot of tribes that still live nearby in a higher state of life.

The area occupied by the Guayaki is not abundant in fruits or edible plants, except a palm from which they make meal. But this area is abundant in honey storing insects, chiefly wasps of the genus Nectarina and those of the genus Polybia. These wasps sting furiously but their nests yield good supplies of honey of good flavor. Real honey bees such as ours were introduced to Paraguay years ago and have spread to the forests. Their honey is also utilized but the Indians seem not to approve of the light colored wax of honey bees. There are also abundant nests of the stingless bees of the genus Melipona, varying in size and in abundance of their gathering. These are much sought by the Indians who use the honey in the pots of these nests and also the wax for their primitive vessels.

Meliponas construct a special entrance to their nests, composed of wax mixed with propolis and soil. It is an inverted funnel and one guard stands with its head through the single opening until a returning bee enters or one departs, when the guard retreats for a second to allow passage. These entrances are conspicuous and the Indians watch for them. When a nest is discovered in a hollow tree trunk, they cut it open with their stone axes and remove the spoils to the waxen vessels that they carry with them. They use crude pots in which to melt the dark wax from the Melipona nests. To climb to the nests they use a cord made of plant fibers and hair and to eat honey a sort of brush to dip into it. Two thirds of all their implements are those used to collect or preserve honey and wax.

There is temptation to report many things revealed in this book about these wild people, but something about their overnight camps is enough. They make one night stands most of the time, seeking a thicket in the forest away from streams so as to avoid mosquitoes. They clear the thicket for several square yards, build fires around the border which serve to keep off mosquitoes, jaguars, snakes and the cold, their worst enemy. The men build the fires and then hunt, while the women make palm meal, and prepare the evening repast. Sleep becomes possible by lying in the warm embers and once in a while somebody gets up to renew the fires. In periods of heavy rain or unusually cold weather they sometimes build temporary shelters. Evening offers time to repair weapons, mend leaking wax pots in which honey or water is carried and do other odd jobs. But morning finds them again on the move, for one cannot live on honey from bee trees and stay in one place.

If this is a serious book, as it seems to be, then a beeman wonders

whether he should feel satisfied that there is a so-called civilization based on honey or whether he should resent the suggestion that a honey civilization is pretty low down. Perhaps the person who should most resent the assumed aspersions of the book will be Dr. G. H. Edgell who wrote so thrillingly about bee hunting, for this places him in strange company. But we find relief in the fact that the bees are not our honey bees, only stingless bees that we cannot and do not use. At any rate it has been fun reviving my French enough to read this book with some pleasure and amusement.

In case you are curious, the book is published by Librairie Gailimard, 43 Rue de Beaune, Paris, my copy being marked 170 francs, but since the franc changes in value sometimes that is not a safe guide.

Bees Remember

The obvious example of bee memory is in their ability to return to the hive from any point of the compass, regardless of the many changes in direction occurring in a single nectar or pollen gathering trip. But that bees can remember a fact for several days is something that, to me anyway, was unknown. Most of us are prone to attribute all insect and most animal behavior to "instinct", and we let it go at that.

But here is an instance of mental functioning that cannot be attributed casually to instinct.

One day, a few hours before a rain, I placed a wax worm-infested frame of honey outside my city apartment for any stray bees to clean out. It was not long before hundreds of them were doing an otherwise messy job for me. Then the rains came. For two days it rained. But on the third day they came again, and finished the job.

When I removed the comb indoors rain was beginning to fall again. It continued for a full 24 hours, washing the building clean. Nevertheless, the first ray of sunshine found hundreds of bees flying in circles and spirals above the spot where the comb had rested. For two more days they returned, in diminishing numbers, in search of that temporary bonanza. Every so often, for several more days, a few bees could be seen flying back and

forth, probably with a hopeful glint in their eyes.

I feel that we must discount the possibility of a vestigial odor at the spot. The rains were too copious and lasted too long. Did those bees remember, and return hopefully, as does a hunter to a spot where one season he flushed a fine covey of fat quali?

Leonard C. Rennie, Virginia

Disease Insurance in Britain

Through the kindness of Mr. L. Illingworth, is secretary, we have had the opportunity to learn of the work of "Bee Disease Insurance Ltd." which operates in England and Wales. (Scotland and Ireland have their own plans).

This association has 26,000 members, all affiliated through local or county associations. Each association is required to subscribe five Pounds (\$14.00 at present rates) for each 100 members, only 20% of which is paid on joining. So far the plan has been self-sustaining so that further calls have been unnecessary.

In addition each association must collect and pay annually one shilling (14c now) for each member, though members may pay more up to a maximum and get additional insur-

Bees, combs and supplies destroyed by disease are paid for on proper certification at the rate of about \$2.50 per pound of bees and 25c per comb (poor ones about half that). This is for loss before May 31. The scale is relatively less as the season progresses.

Over 2,000 pounds is received each year as premiums. Usually the compensation paid leaves a small surplus as addition to the general surplus. The compensations may be adjusted from time to time to assure that the plan will be self supporting.

The insurance is mutual thus minimizing taxes, and practically all officers' services are gratis including that of the general secretary. They work for the love of it and the good they can do.

Many European countries have similar plans. Whether they could be made workable in North America is a question. Perhaps so in the heavily inhabited sections where large associations might be formed.

Mark All Our Queens? . .

In the new edition of Bertrand's "Conduite Du Rucher" Mr. A. Valet recommends that all queens be marked. French and Swiss queen breeders follow this as a general policy and are in accord as to the colors used, i.e.: 1948, brown; 1949, red; 1950, green; 1951, white.

To facilitate such queen clipping and marking they also use CO₂ (carbon dioxide) just as most workers do in artificially inseminating queen luces.



Tomatoes, Pianos Clothes, Hats and Honey

by Arthur W. Kehl

Some years ago H. J. Heinz was implored by his salesmen to put out a 10 cent can of tomatoes. At that time the Heinz product was a 12 cent seller, and the salesmen thought if they had a cheaper brand it would be a simpler matter for them to meet the lower priced competition.

But Mr. Heinz would have none of it. "Don't you know," he said, "that the reason this business has been successful is because we don't have a 10 cent can to sell? We don't want to put ourselves in the '10 cent' class. SELL QUALITY AND THE PRICE WON'T MATTER."

There are honey salesmen today who have the same notion about the price question as the Heinz salesmen had. They are convinced that the reason they cannot get more business is because their price is too high. If they would only cut the prices a little they know they could get a lot more business. But could they?

The Steinway piano sells for nearly three times the price of a piano made by a competitor who claims that his piano is just as good as a Steinway. Yet last year Steinway sold twenty-five pianos for every instrument sold by the price competitor.

If you are willing to walk up a flight of stairs you can buy a suit of clothes that looks like wool for \$25. Many mail-order houses list garments cheaply in their catalogs. As compared with these cheap garments Hart, Schaffner & Marx clothes sell for two to three times as much. But the public knows them as being all wool. Consequently, flart, Schaffner, & Marx, selling a suit at twice the price of its competitors, does almost as much business as all the price cutting competitors put together.

A survey of sales of members of the American Association of Wholesale Opticians shows that the companies who do the bulk of the business are not those who have the lowest price but those who put out the highest quality merchandise and charge prices commensurate with that quality.

Only A Quality Business Can Endure Take your honey. How many are there who undersell you in price? These competitors go about the country saying that their product is just as good as yours. They advance all kinds of ideas and reasons why they can undersell you. They don't advertise as you do, they economize by building their own equipment, or offer some equally plausible excuse for their lower price. Naturally they make a sale once in a while - you can sell some people anything oncebut the fact remains that the combined sales of these price pirates is but a fraction of the business done by the quality sellers. Moreover the quality sellers will be in business and prospering when the man who stakes his future on price alone will have long been forgotten.

These quality sellers are able to pile up these sales records, not because of their price, but in spite of it. The price of a Steinway plano is its badge of quality. Even though there may be other pianos "just as good," the man who buys a Steinway gets its extra cost back every time he looks at it in his drawing room.

"I am quite aware that I am paying more for a Knox hat." said the late Justice Brandeis of the United States Supreme Court, "but the feeling that I am wearing a Knox hat is worth the difference."

Cheap things are made for people who cannot pay more; for people who must get along the best they can with something almost as good. Such goods are built down to a price, rather than up to a standard. Lacking quality, sooner or later they will cause dissatisfaction. The buyer forgets that when he made his purchase he compromised with something

cheap. He expects the same service from his \$500 stenciled piano as he would from a Steinway. When the expected service is not forthcoming he is aggravated and put out. Forever after he is "down" on the man who sold it to him.

On the other hand, the man who buys a quality product soon forgets that he paid more for it, and remembers only the satisfaction it gives him. Just as the man who buys the substitute regrets it ever afterwards, so the man who buys a quality article will be a lifelong booster for the man who sold it to him. Quality is the strongest talking point you can have. Quality means repeat orders. It means trade that stays with you year in and year out. It means that you will be able to hold what you have and add to it. In short, it means enduring success and not success built upon the quicksands of here-today, gone-tomorrow custom-

I am indebted to J. C. Aspley, of the Dartnall Sales Corporation, for a number of the instances cited in this article, but they apply to the selling of honey as well as to tomatoes, pianos, or pickles.

It has often been said that the price of honey is kept down by the price of its competitors, namely, jams and jellies and corn syrup. In checking a number of stores recently I have found honey to be lower in price than most jams and jellies; is its quality not as good? In comparison to corn syrup, honey sells for about 50% more money but is displayed next to a 15% solution of maple strup which sells for double the price and is likewise a competitor.

How many beekeepers, honey producers, or honey packers or anyone connected with the honey industry actually put on a special campaign during National Honey for Breakfast Week? To me, it is the lack of activity on the part of the persons who should be interested that continues to cause the ridiculously low prices for nature's best energy food.

Magic in Honey?

by Alice Wagner

Reprinted from Popular Dogs Magazine, November 1950.



NE of the most exasperating experiences in the life of a breeder is to have one of his best pupples suddenly turn against food. It's such a helpless feeling to see the puppy growing thinner and more listless every day.

Such was my experience only a short time ago. Force-feeding and injections of vitamin B helped, but the puppy steadfastly refused to eat unless she was forced. The old adage, "Let the pup get good and hungry and she will eat," just didn't work. And then, one of those rare coincidences happened along; I received several pounds of honey as a gift.

Knowing that honey, like all other sweets, is an energy-producing food, I gave some to the puppy. Cautious at first, she licked her chops and eyed the honey, then abruptly she started to gobble it up as fast as she could.

To say that the problem of feeding the puppy was immediately solved sounds incredible, but it was. I sweetened her morning milk and pablum with honey; poured a table-spoonful over her noon meat and meal and even added some to her supper and bedtime milk. Magic in honey?

I think so. Just two months ago the puppy was three pounds underweight and today at eleven months she is overweight.

In discussing my experience with several doctors who have been working on nutritional research they were not surprised and informed me that honey is a favorite food for post-operative patients, for people with weak digestion and is especially beneficial to those with weak hearts.

So it is with pleasure that I pass on the fact that honey seems to be unique among energy foods. That honey is absorbed by the blood without change (it is often called a "blood sugar") means that within minutes the patient will be supplied with more energy. What a boon to those sick pupples!

Although there are no records relative to experiments with honey to determine the exact mineral content* (it is thought to be small), scientists claim that the mineral and calcium

*A table showing the mineral constituents of honey (taken from experiments reported by Schuette, et al.) is given in the Rive and the Honey Bee, edited by Roy A. Groux, 1949, Dadant & Sons, page 374.—

retention is greater if honey is included in the diet.

A recent scientific experiment proved that on a diet of milk alone rats became anemic but when honey was added to the milk the diet was sufficient. Well tolerated by infants, honey has been proven to facilitate weight gains and in confirming these facts doctors add that honey had a definite healing value. Bacteria in honey, unlike that in milk, does not grow and thrive.

Since honey takes its flavor from the nectar of flowers it varies in color as well as flavor. However, flavor is not a test of quality, the grades on honey being largely determined by the freeness of foreign matter, cappings, etc., in extraction. But the pupples don't mind a bit of wax — they'll welcome even the cheaper grade.

We shall be interested in watching further experiments with honey and hope to bring you the results. We would also welcome our readers' experiences with honey. In the meantime try honey for those finicky appetites!

You may recognise the dog pictured on this page. He is Major, the grandson of Ris-Tin-Tin, owned by Mrs. Ethel Guar of Los Eanos, Calif. His picture was winner in the Gover Goulest in March. Major thrives on honey in his food, and in the picture below he is trying to hurry and finish his dish so that he can have some of the cat's.





by
William C. Roberts
and
Otto Mackensen

Breeding Improved Honey Bees

U.S.D.A., Agr. Res. Adm., Bureau of Entomology and Plant Quarantine*

Preface

Within recent years the technique of artificial insemination has been improved and used successfully in experiments on bee breeding. Thus a major barrier in our efforts to produce better breeds of bees has been successfully hurdled.

Readers of the bee journals now find advertisements telling them that improved hybrid bees are available. Since these are said to be superior to existing races or strains, the wide-awake beekeeper will want to know how they are produced.

This is the first of a series of articles on the use of controlled breeding to improve honey bees. This article discusses the relationship of bee breeding to animal breeding in general. Articles on heredity and variation, sex determination and bee breeding, inbred and hybrid bees, and production of hybrid queens will follow.

I — Bee Breeding and Animal Breeding

Almost everything that we eat or wear is the product of our domesticated plants and animals. Most of these living forms have been cared

for and propagated by man since long before the beginning of written history.

Domestication implies several things, no one of which is sufficient to define it completely. It usually means tameness; but individual bears, lions, or even snakes can be tamed, and few of us would call them domesticated animals. Domestication further implies bringing the growth and reproduction of the plant or animal at least partly under man's control, but certain pigeons and geese usually choose their own mates and accept no others. Man uses domesticated animals or their products for his own advantage, and he usually keeps them in or near his dwelling. From the variable wild species man has, by selection and reproduction, developed individuals that suit his purpose.

Breeding and selection have therefore led to the establishment of types or varieties useful to man. Selection for usefulness and survival under man's care has frequently resulted in varieties incapable of survival without man's care. Man did not create these genetic forms. By controlled breeding and selection he

merely succeeded in putting together or fixing these varieties from the genetic variability that existed in their wild ancestors.

The honey bee has a definite place in our modern world. Its products of honey and wax are useful to man, although perhaps not essential to all men. However, the pollination activities of bees affect the lives of most of the people of the world. Although we may never succeed in taming the honey bee or in getting it to change its mating habits, it seems evident that the definition of domestication is sufficiently broad to include this most useful insect. The ways and means of improving the economic value of honey bees by controlling their growth and reproduction will be discussed in this ar-

The breeder of animals must decide which animals shall produce the next generation. His choice is determined by his knowledge of the variability that exists in the potential breeding population and the usefulness that he desires in the suc-

^{*} In cooperation with the Wisconsin Agricultural Experiment Station and Louisiana State University.

ceeding generations. The variability in the breeding population is due in part to differences in inherited factors and also in part to differences in environment. A knowledge of the science of heredity should make it easier to choose intelligently among the many animals in the potential breeding population.

Because of the social nature of the honey bee, the colony is the unit upon which selection must be based for most economically important characteristics. The individuals of a colony consist of a queen and her worker and drone offspring. queen is mated before she begins egg laying, and her mate is thus the father of the workers in the hive. She may have more than one mate, and therefore the genetic variability of the colony may be due to several individuals. Each of these individuals can be influenced by environmental factors that are not always easy to evaluate. The bee breeders' problems in properly evaluating the genetic and environmental factors affecting each individual colony are much more difficult than those of other animal or plant breeders.

Although honey bees have been propagated by man for 5,000 years or more, there is little evidence that much progress in bee breeding has been made. No superior breeds of bees have been established. species has been subdivided into races, and all these races show considerable variability. Apparently they are the product of many generations of random matings within populations that have been partially isolated by geographic barriers. Man may have had some influence in fixing these races by selection that altered the frequency of certain inherited factors.

The aim of the bee breeder is to produce better or more profitable bees. This may mean more honey per colony or it may mean more efficient pollinators. The breeder must work with the reproductive individuals that are available. Since colonies of bees differ in many characteristics, the breeder has variability from which to select. This variability may be due to both genetic and environmental factors. The successful bee breeder must observe his colonies closely so that he can make proper allowances for environmental factors affecting the genetic variability in his breeding stocks.

His next problem is to mate the breeding individuals so as to obtain genetic improvement. From the variable colonies he attempts to unite

the genes (the genetic factors) for good qualities from many stocks into one line or breed while eliminating inferior or less desirable qualities. In order to succeed he must have some knowledge of the science of heredity. Geneticists have accomplished this with many plants and animals, and therefore it is possible with bees.

Since the honey bee is an animal, it would appear that animal breeding methods should be used. The honey bee, however, is quite different from the economically important animals. Its method of reproduction is in a sense more like some plants. We shall attempt to describe these differences and likenesses and show how they affect methods of bee breeding.

The science of heredity is relatively new, having only become recognized as a science in the 20th century. Yet a great amount of real progress through selective breeding was accomplished in most of our economically important plants and animals long before Mendel, the father of genetics, was born. Most every breed of horsen, cattle, hogs and chickens used in the United States today was established before the 20th century. Yet even today there are no fixed breeds of bees—we still have only races.

Let us review a few of the methods employed in the establishment of improved breeds of livestock. The fundamental biological principles of inheritance are the same whether we are breeding plants or animals. Therefore, much about bee genetics can be learned by studying the genetics of other animals and plants.

All our domestic animals except the guinea and the turkey originated and were domesticated in prehistoric times in the Old World. Most domestication evidently occurred in central or western Asia, although some is believed to have taken place in Europe, Egypt, India and China. It is still disputed whether most animals descended from a single wild species or from two or more species.

Early naturalists supposed that species were fixed and had no genetic variability. However, modern geneticists have shown that wild populations of one species of animal were not genetically uniform. They have also shown that selected breeding within these wild populations, with their existing genetic variability, can produce distinctly contrasting races or breeds within a few generations.

It seems probable that all the

races of bees, as we know them today, developed from a single wild species of honey bee. In time they became dispersed over a large part of the Old World and were somewhat isolated into many small groups. There was, of course, some interbreeding between groups, but geographical barriers prevented a great many matings between groups. As a result a certain amount of inbreeding took place within each geographic group. By mutations, natural selection, and perhaps some human intervention in selection, the bees within each geographic area became different from those in other areas.

The bees from the various areas are called races. Probably the most geographically isolated race of bees is the Caucasian. A Russian author who studied this race in its native home divided it into six separate varieties. These varieties ranged in color from the banded appearance of the Italian to completely black. Other genetic characteristics within this and other races of bees are equally variable. The bees of one race are fertile when crossed with those of another race.

Wild cattle, horses, and hogs were also variable animals. The recognized breeds of these animals were developed by selected breeding of outstanding individuals from variable populations. The history of the formation of the beef breeds of cattle that originated in the British Isles is typical of successful animal-breeding methods.

History tells us that migrating people and invading armies usually carried with them much livestock from their native lands. Migrations were slow, and the stocks mingled with and interbred with stocks present in the countries through which they passed. It is not known just how many and what kinds of cattle were introduced into the British Isles througout the ages. However, it is known that the Norsemen and the Dutch carried cattle into the British Isles, and it is suspected that the Romans and the Normans also brought in some cattle. These cattle interbred with the cattle of the islands, and a great amount of genetic variability existed in these stocks before the formation of the breeds that we know today as Hereford, Shorthorn, and Aberdeen-Angus.

About the beginning of the 18th century the common lands of Great Britian were enclosed so that the intermingling of stocks on a wide scale was stopped. The cattle population

was thus broken up into small groups and inbreeding within groups was the result. About this time the cities began to grow and a demand for meat developed. Some types of cattle were more useful for this purpose than others, and breeders attempted to produce these meattype cattle. A few breeders gathered together some of the best of the desired type into one or a few herds. There followed years of rather intense inbreeding between these selected animals and their descendants. Very little outside breeding stock was permitted to enter these herds. After several generations the cattle within these herds were uniform and were distinct from the other animals in the community. Every recognized breed of cattle has arisen from the concentration of the genes (blood) of one or a few animals of greater than ordinary merit.

Breeds have developed in a similar manner among other types of livestock. The Poland China hog was evolved or originated in Butler and Warren counties in southwestern Ohio. The exact combination of breeds or types that resulted in this hog is not clear. Prior to 1830 there existed in this area a number of types, among which were the Bedfordshire, Byfield, Russian, and Big China, Some Berkshire blood was introduced in 1835 and some Irish Glazier blood in 1839. There was intermixing of these breeds without a definite plan for 20 years or more. In 1870 the Warren County hog was black and white spotted. It was regarded as a breed in 1872 and was given the name "Poland China." The diverse races of swine from which this breed was found could hardly have come together anywhere on earth without the aid of man. From this heterogeneous mixture the breed arose by inbreeding of selected sires.

Why have not bee breeders done

the same thing with bees? Many diverse races and strains from all areas of the world have been brought into the United States. There is thus great genetic variability in our bees. When we look around we find outstanding individuals (colonies). We have seen that successful breeders of other animals succeeded in establishing superior breeds of animals by inbreeding and selecting from among outstanding individuals and their descendants.

Bee breeders did try methods used by breeders of other animals but they did not succeed. It is true that they could not control matings so successfully as other animal breeders, but this was not the major cause of their failure. Studies indicate that a major cause for this failure was a lack of knowledge of sex determination in honey bees. Its importance to bee breeding will be explained in a later section.

This series will be continued in August.

Operation Honey Bee

"Operation honey bee occupies Agricultural Department apiarians. Officials want beekeepers to increase their colonies and boost beeswax output to eight million pounds yearly, double the present total. The wax, needed for coating shells and in plane manufacture, can't be made synthetically." This statement appeared in a recent issue of the Wall Street Journal under a column entitled "Washington Wire."

Certainly the beekeeping industry desires to cooperate with the Department of Agriculture in an effort to increase the production of beeswax. In its June issue, the American Bee Journal pointed out that the industry must place emphasis in the national emergency on the production of beeswax and on pollination, with less emphasis on the production of honey.

Increase colonies? Surely Washington officials know it is too late to do this in 1951. Low honey crops and too many years of low prices for honey have had the opposite effect. Washington officials have been told repeat-

edly and emphatically that this would be the result.

Eight million pounds of beeswax; double the present output? It can be done but where is the incentive beyond our patriotic duty? Will the Government protect the industry in the case of surplus production? What cooperation can we expect from them to help accomplish this goal?

Officials in Washington were told emphatically that the minimum support level was not enough—that it was insufficient to maintain beekeeping—that the minimum support level was depressing our honey markets. They were told that dyed-in-the-wool beekeepers were going out of business—that pollination would be affected. They gave to the industry the least they could under law—a support level which they contend was designed to reflect 60 per cent of parity.

Increase colonies? Double the production of beeswax? Give us some real help, Washington, and we'll be very happy to cooperate to the best of our ability.



A Case of Sabotage

by H. J. Rahmlow

N February 24, I walked a quarter mile through two feet of snow to an apiary of about 30 colonies which had been moved to this new location last fall. It's a nice place, with trees on three sides forming an excellent windbreak.

The colonies were covered with snow almost to the upper of the three brood chambers. Suddenly I noticed something very strange and exclaimed, "Those X X X hunters—they've shot a hole through the top hive bodies." Looking into a hole in the first colony, I noticed that the outside comb also had a hole in it, larger than the one in the handhold of the brood chamber, but the next comb was all right.

A giance through the yard showed that every single colony had a hole on both sides of the upper brood chamber, directly in the handhold, and several had another hole in the rear. These holes were about one inch in diameter, some a little larger. The edges were rough, some were almost square in shape, some more oval. I looked to see if someone had cut the hole with a chisel, but could find no chisel marks. In fact, the whole thing was very puzzling.

Looking through the colonies, I found the bees in excellent condition. The covers had not been removed. There were no tracks in the snow. No honey had been taken from the colonies. Why would anyone do such a foolish thing?

I then spoke to Dr. C. L. Farrar about it. He said he had seen a yard in California some years ago, in which woodpeckers had cut similar holes. That sounded like the answer. We then asked men in the Wild Life Management Department

at the University of Wisconsin and they said it was entirely possible that during the winter the woodpeckers, having a keen sense of hearing, could hear the sound of the bees, perhaps even in some way detect the larvae, the same as they do larvae in trunks of trees. No doubt they had bored these holes in a vain effort to reach the larvae and eat them as the food supply was very scarce this past winter due to low temperatures and deep snow.

In a total of about thirty colonies from 60 to 70 holes had been drilled—a real plece of sabotage. The holes were only in brood chambers containing bees and brood, none in empty hives. To repair the damage we drove two shingle nails into the wood at the top of the holes and then filled them with wall crack filler such as painters use.

Minor Sources of Nectar and Pollen

Have beekeepers completely forgotten the importance of a succession of blooming plants which are minor sources of nectar and pollen? August P. Beilmann, who writes the interesting article in this issue of The American Bee Journal entitled "Bees and Wild Flowers," thinks that beekeepers generally have forgotten, and contributes declining honey yields partially to the disappearance of many of our wild flowers.

Dr. Beilmann suggests that the best way to re-establish these wild plants is to place a few honey-bee colonies in areas where there still remain some of these minor sources of nectar and pollen. He thinks that beekeepers could benefit themselves by placing a few colonies here and there as a means of helping Nature to return these plants.

One of the Dadant apiaries southwest of Hamilton has had bees continually for more than forty years. Here colonies build up well: it is one of our most dependable locations for honey. Here the woods are full of wild flowers; the pastures are lush with white clover. If one drives a couple of miles away in any direction, this is not the case.

Have we forgotten the importance of a succession of minor sources of nectar and pollen? This is worthy of your consideration, Mr. Beekeeper.

Rosemary Honey-Its Possibilities in the U.S.

by Pascal Le Clerq

We do not produce rosemary honey here in the Jura in eastern France. Our climate is not very different from that of Iowa, Illinois or Kansas; not so divergent in its extremes perhaps, slightly cooler and more rainy. Our winters are seldom as cold as yours. Even though most of the plants which grow in central western U. S. A. grow here, I doubt that rosemary would.

As an experiment we tried to replant rosemary and thyme in our locality when I was a youngster. Rosemary just wouldn't make it. As to thyme, it would vegetate for a few seasons and then freeze in a hard winter. Even then, this thyme would not be half as perfumed as that of southern France.

But for the past twenty years we have been raising queens in southern France midway between Avignon and Marseille, about thirty miles from the Mediterranean Sea. This is right in the middle of a good rosemary area, in a dry region with a typical Mediterranean climate. Rosemary does well there. It grows

on slopes like those around San Bernardino in California; there used to be a fine forest there but it burnt out 18 years ago; a shrubby vegetation of rosemary, evergreen oaks, etc., has taken the place of the forest.

As a rule, rosemary yields much better after a wet winter like the last one they experienced in the "Midi," but even down there it does freeze once in a while, generally in January or February.

As you may know, when rosemary yields it is a wonder. I witnessed a flow like that some six weeks ago, and I just could not believe it. Bees worked on it from dawn to dusk as if they had gone mad. They would store from four to five pounds a day. When rosemary yields there is no better honey plant that I know of here in France, but it generally yields only every other season, seemingly needing a rest after a heavy nectar yielding year.

Beekeeping friends of ours down there made around 50 tons with 1500 colonies in 1949, which was a record year for rosemary. But last year they did not even use their extractors. The winter had been dry, the spring cold, and rosemary was resting too.

As to the honey, it is the best one can produce in France; it is the highest priced too, together with fir honey in eastern France and in Alsace. It is sold, generally, under the name of "Miel de Narbonne" or just "Miel de Rosemarin." It is about as heavy to extract as sweet clover in John Holzberlein's territory on the western slope of Colorado. I think you would call it a light amber honey but it is water white when granulated.

If anyone succeeds in growing rosemary in America I should be glad to know of it. While in the U. S., I inquired several times about rosemary. I believe I was told it had been tested back east, somewhere in Maryland or New Jersey, and that it had proven a failure as a honey plant.

It does deserve further trials, however, in sections akin to those of southern France.

Les Arsures, Jura, France

Revision of Minnesota Apiary Laws . . .

The Minnesota Legislature and the state apiarist are to be complimented for enacting some fine legislation in behalf of the beekeeper. An "abandoned apiary" clause which was included in this new law should do much toward controlling American foulbrood in this state and produces that: "An abandoned apiary means an apiary wherein the owner or operator thereof fails to:

(a) Inspect each colony in the spring and destroy any colony containing Bacillus larvae, American foulbrood.

(b) Provide super room during the honeyflow.

(c) Remove the honey crop at the end of the season.

(d) Inspect each colony in the fall when the crop is removed and destroy any colony containing American foulbrood.

(e) Provide reasonable and adequate attention to each colony during the year to prevent robbing which might jeopardize the welfare

of the neighboring colonies through the spread of disease."

Provisions for enforcing the above are listed in this same law in sections 9, 10, and 11 as follows: "When an apiary is deemed by the state entomologist to be an abandoned apiary, he shall give written notice by registered mail to the owner or operator thereof, if he can be located, that he deems such apiary an abandoned aplary. If he cannot be located such notice shall be served on the owner of the land on which the apiary is located. If such apiary continues to be abandoned for 60 days thereafter, he will seize the apiary and take such further steps as to the sale or destruction thereof as its condition warrants.

"If any abandoned apiary is found to be diseased, the state entomologist shall cause it to be immediately destroyed.

"If any abandoned apiary continues as such for 60 days after the owner or operator thereof has been notified by the state entomologist to cease the abandonment and neglect thereof, the state entomologist shall take possession of such apiary and proceed to sell it at public auction. Any person to whom such an aplary is sold at such public auction shall agree, as a condition of sale, to operate such apiary in a safe and proper manner and in accordance with accepted standards and the regulations of the state entomologist. No such abandoned apiary shall be sold at any such public sale to the owner or operator who abandoned or neglected it.

"After deducting the expense of such public sale, the proceeds thereof shall be paid to the owner of the apiary so sold."

These provisions were enacted into law to provide the necessary "teeth" in the previous apiary law, to compel certain beekeepers to clean up their yards or sell them to a beekeeper who would do so. It gives the state apiarist the necessary power to remove some of the yards which have been neglected and abandoned for the past three or four years and should help to clean up some of the sources of disease in Minnesota.

E. F. Bea, Minnesota

Sell Honey To Whom?

It has been reported to us that practically all of the eight million pounds of honey purchased by the Government in the 1950 price support program came from beekeepers, who made little or no effort to market it through regular channels of trade. On the other hand, packers with marketing setups moved the honey they obtained, and very little was shipped to the Government.

The American Bee Journal cannot condone the practice of these beekeepers if it was their intention to enter the program and to divert honey of bottling quality from regular channels of trade by delivering it to the Government.

We suspect that in most cases such was not the intent. We suspect that, failing to find a buyer who would pay them the support level and having no established marketing system, they had little alternative but to sell finally to the Government. Nevertheless, this dismaying predicament is not healthy for the beekeeping industry. In fact, it looms upon the horizon of 1951 as a black and expanding cloud bearing absolutely no good for the industry.

What is the solution to this problem? What can we do constructively to overcome this situation?

Certainly the honey industry needs to launch an extensive and well-planned marketing program, for this is the real solution. The day may soon come when we will not have price support, yet beekeeping must be maintained because of its importance through pollination to our agricultural economy. Planned pollination as an agricultural practice will implement matters both by adding to the beekeeper's income and by aiding our marketing efforts. The pollinator will not produce much honey and, as the general public comes to fully appreciate the honey bee.

people are going to be more honey-minded.

Through a one-fifth cent per pound universal container levy, the Canadian Beekeepers' Council launched an advertising campaign costing \$23,000 in 1950. They engaged the services of the American Honey Institute which supplied news releases and promotional aids. Further, they urged every beekeeper to get out and help by creating new customers and doing more to sell a share of the honey crop.

On December 1, 1949, Canada had 42 million pounds of honey on hand. During 1950 they sold 40 million pounds representing a per capita consumption of 3 pounds—the highest in the world. And there is every indication that Canada will run out of honey before the 1951 crop goes to market.

We have fallen down seriously in our marketing program. Too many beekeepers do little or nothing to sell their honey and to promote its use on the American table. Some put out a clean, attractive pack and are suited to the task of marketing. Those who do not should sell to a packer who can do a good job of packing and merchandising. But all should help to promote the use of honey on the table daily.

Reportedly we have 500,000 beekeepers in the United States. If each were to influence the buying of a pound of honey each day by some consumer, we would market 182,500,000 pounds of honey a year. Do you realize that we produced only 233,013,000 pounds in 1950? Isn't this the solution? We even have the advantage, over producers of most other commodities, of being widely scattered over the entire country.

Come on, Americans, let's show Canada we can solve our marketing problem. Let's sell our crop to the consumer — not to the United States Government.

Bt. S. Box 7

Modern Beekeeping
If you are taking time to read, why
not read the heat?
Condensed to save you time.
Illustrated to give you pleasure.
1 yr. \$1.50; 2 yrs. \$2.50; 3 yrs. \$3.55
MODERN BEEKEEPING
The Picture Bee Magazine

Queens ITALIAN Queens
Nice Large, Laying Queens
1-09—55c each; 100 up—50c each

MITCHELL'S APIARIES Bunkie, Louisiana Morthern Bred
Leather Colored Italian Queens
75c Each
Air Mail if Distance Justifies.
No Charge for Clipping.
DIEMER BEE CO.

THE LEAST EXPENSIVE COMBS YOU CAN GET -

Combs from Dadant's Crimp-wired Foundation have little non-profit space—ac sagged areas; no distorted cells; few droass. There will be very few combs to discard. Each comb, with reasonable care, will last almost as long as your beekive. So every comb you have becomes a long-term investment. They start to save you money the moment the bess have built them. In the end they are the least expensive combs you can possibly get.

DADANT and SONS,

Inc.

Hamilton, Illinois

Requeen With Our **Bright 3-Banded Italian Queens** This Summer and Pall.

TAYLOR APIARIES
Box 248 Luverne, Alabama

WESTERN

Beeswax Headquarters Certified Beeswax Salvage Plant Custom Bendering Poundation Manufacturing

WOODROW MILLER & CO. 440 West J St. Phone 1722 Colton, Calif.

OHIO QUEENS

Gentle 3-banded acclimated Italian stock

"THEY PRODUCE"

. \$1.00 each .90 each 25 up Select, tested .90 each

BARGER APIARIES
Carey, Ohio

AUSTRALIAN BEEKEEPING he Leading See Journal of outhern Hemisphere is the Australasian Beekeeper

cription 13 shillings

Honey Bees

EUGENE WALKER LIVE OAK, CALIFORNIA The same of the sa

> Northern California Italian Package Bees and Queens

F. E. Morrison Rt. 3, Box 3696, Auburn, California

TRY THE BEEKEEPERS MAGAZINE

Introductory Offer-flix Months \$1.00 Single Copy Current Issue 20c LANSING 17, MICH. Fourteenth Year of Publication

AMBER HONEY and Wax Wanted

Wax Worked Into Foundation LOWEST PRICES ON BEE SUPPLIES

Write for Catalog, Save up to 28%

THE FRED W. MUTH CO. 229 Walnut St., Cincinnati 2, Ohio Since 1858



HONEY DATE BARS

1

1/2 cup shortening

cup honey 1

1 teaspoon vanilla

3 eggs or 6 egg yolks 114 cups sifted flour

teaspoon baking powder 1/2 teaspoon salt

1 cup chopped dates

cup chopped nuts Confectioners' sugar

Blend shortening, honey and vanilla until creamy. Beat in eggs one at a time. Sift dry ingredients into egg mixture. Blend. Add nuts and dates and stir just enough to distribute evenly. Spread in a greased 9 x 12-inch pan. Bake in a moderate oven (350° F.) until golden brown, 30 to 35 minutes. Cool. Cut into bars and roll in confectioners' sugar. Three dozen 1 x 3-inch bars.

New Results in Vetch Seed Tests

by A. B. Kennerly*

Some new results on increase in vetch seed production where bees were used as the pollinating agent have been revealed by A. H. Alex, F. L. Thomas, and Bert Warne of the Texas Agricultural Experiment Station.

A check field was used which had no bees within two miles. Five fields were observed which had 1/10 to one colony of bees per acre of vetch located within one mile of the field. The increase in production of seed over the check field was 74 per cent.

Two other fields of vetch which had 11/2 to 3 colonies of bees per acre of vetch within one-half mile produced an increase of 229 per cent.

The above studies were made in Erath County, Texas, during the 1950 season. Other tests for previous years showed that a gain of 41 per cent in seed production was

accomplished with less than one colony per acre of vetch and within one-half mile of the field.

When the number of colonies was stepped up to 11/4 to 5 colonies per acre and within one mile of the field, the resultant increase was 80 per cent over a check field that had no bees within two miles.

Honey production ranged from no surplus to 40 pounds per colony; consequently, beekeepers desired more profitable bee pasture than vetch offered. Some farmers paid up to \$2.50 per colony for pollination service while others offered payment on the basis of a normal honey crop, and a few offered a share of the seed crop.

Some farmers were disappointed in their increase in seed yields when they failed to get their neighbors to join with them in securing pollinating services. Bees which they rented flew to neighboring fields of vetch. In other cases, sweet clover blooms attracted the bees just at the time the vetch was in bloom.



Just a Sample!

This scale colony belonged to Chas. S. Hofmann, Minnesota, last year, and yielded 327 net pounds of honey above all feed for spring and fall. To prove that he didn't concentrate all efforts in one place, Mr. Hofmann also sent us a picture of his home yard showing 28 colonies almost like this giant. From the whole yard, the gain was 7,000 net pounds of honey.

Farmers can overcome this problem by mowing or grazing the sweet clever so that it will not bloom at the same time the vetch is in bloom.

Hollywood Star Helps Honey

According to the Australian Bee Journal, Australian honey publicity in England "has fallen into the lap" of Australian beekeepers. As an instance, "lovely Hollywood star, Vera Ellen of pert face and twinkling feet told the Associated British Studios that she practically lived on honey. She was reported to have said that honey gave her the vitality which saw her through the strenuous musical 'On the Town' and her new British film 'Happy Go Lovely.' She eats honey by the dessertspoonful."

Australian honey displays are now shown in the foyers of more than 600 theaters where "Happy Go Lovely" is being shown.

A New and Better . . . STARLINE HYBRID

Produced under natural conditions by approved methods. 1-24, \$1.20; 25-99, \$1.15; 100 up, \$1.00. M. CUTTS & SONS

Chipley, Florida

CARTONS FOR CUT COMB HONEY



Beautiful two colored cartons as pictured. Leakproof, strong enough to hold up a 20 poundweight, holds approximately one pound comb honey, big cellophane window. (Will not hold sections.)

Write for our big free catalogue listing this and other items not listed in other catalogues.

THE WALTER T. KELLEY GO. Box 210. Paducah, Ku

QUEENS-PACKAGE BEES FOR 1951

ESPARLISHED LIES

Maximum production is most easily assured with superior bees and queens. That's one way we try to help you make money. Superior bees and queens is our motto at all times. We like to have 80 per cent deposit and balance before shipping date. We believe this is fair to all—as we like to plan and ship the day you want shipment. Price scale:

> Queens, any number \$1.00—Tested Queens \$2.00 package and queen _______\$3.00 any number 3-lb. package and queen 4.00 any number

THE VICTOR APIARIES

Uvalde, Texas

Hamilton, Illinois

HOWARD WEAVE	ER'S C	CAUCAS	IAN	QUEENS
--------------	--------	--------	-----	--------

1 - 24		No	charg	e for	clipp	oing	or	mark
25 - 49 50 and up	.90	ing.	Air	maile	l on	req	ues	t.
HOWADD WEAVED				61-			-	

HOWARD WEAVER

DADANT & SONS, Inc.

BETTER BRED QUEENS-THREE-BANDED ITALIANS

Watch those failing queens and poor colonies. Be sure and replace them with our Better Bred Stock and watch them pay off.

Queens .

CALVERT APIARIES

ARE YOU LOSING BEESWAX?

We reader old combs, cappings, and slumgum for beskeepers. Our steam was presses get every available ounce of wax out of this material. Send for terms

July, 1951

^{*} Texas Extension Service College Station, Texas

1951 Shipping Season Completed

THANK YOU

for your patronage

LOOKING
FORWARD
To Serving You

in '52. Book Early

FOSTER APIARIES
Box 239
COLUSA, CALIFORNIA

PALMETTO QUALITY QUEENS
Be a thrifty one in '51! Use Ellison's
Mott strain of three-banded Italians.
No disease and guaranteed to please.

70c each

1 to 10 11 to 20 More than 20

C. G. ELLISON & SONS Belton, S. C.

NEISES

HONEY EXTRACTING and BOTTLING EQUIPMENT

Mf'd. and For Sale by THE NEISES CO.

Box 249, Marshfield, Wis.

Queens Queens Queens
Spears' Quality Bred Italians
Productive, gentle, easy to handle.
Live delivery guaranteed on all shipments. Queens in any quantity but
only the best of "Quality."
Quality Bred Italian Queens, 45c each
for regular mail—add 5c each for
air mail.
SPEARS APIARIES, Hamburg, Lo.

HONEY CONTAINERS

We have a complete stock of 5-lb. and 10-lb. tin pails and 60-lb. cans. GLASS JARS

1/2 and 1-lb., 24 in a carton. 2 and 3-lb., 12 in a carton. 5-lb. glass pails, 6 in a carton. Write for prices.

A. H. Rusch & Son Co. Reedsville, Wisconsin

CAUCASIAN

Queens remainder of season 75c each

D. T. WINSLETT
7736 Auburn Road
Citrus Heights, Calif.

You Asked Us - -



When is the best time to take off honey? Some of our light extracted honey looks as if it has air in it and when poured out leaves a white scum. What causes this?

Walter A. Law, Arkansas

Honey should be completely cured and capped at least three-fourths of the way before it is taken off the bees. If it is taken off before it is cured it will ferment, as the bees have not had ample time to evaporate the moisture from it. Honey should be extracted as soon as possible after the supers are taken off the bees. If it stands for very long it will absorb moisture from the air and sometimes ferment. After it is sealed in jars it isn't so likely to do

The honey which has air bubbles in it and leaves a white scum may be starting to ferment. Or sometimes a scum will form on honey if it has been squeezed through a cloth. When straining honey, it should be allowed to drain slowly through several thicknesses of cheesecloth. If the process is hurried by squeezing, there will be small particles of pollen, comb, etc. In it which will hasten fermentation.

Is there any material available about the household or local drug store which is satisfactory for marking the queen?

Chas. S. Whitney, Iowa

A good queen marking material is fingernail polish which may be obtained in a drug store in any color available. We find it very satisfactory for the purpose.

Will honey sour if extracted in hot weather?

Hansen Nursery, Iowa

The temperature makes practically no difference as it all depends on whether or not the honey has been thoroughly ripened. If the honey is

well sealed, there is nothing to be gained by waiting for cool weather. However, if some of the cells are open and the honey shakes out when the combs are jarred, then it is best to wait until all of the cells are perfectly sealed before extracting. Usually it is preferable to extract during hot weather as the honey comes out more easily than during cool weather. If there has been a great deal of moisture through the summer, there will be some danger of the honey souring because the bees will sometimes seal the honey over when it is not quite ripe enough. If the honey is very, very thin when extracted, it might be exposed to the air in an open tank which will allow it to ripen still further.

I am not satisfied with the color of my extracted honey. The sources are white Dutch clover, alsike, red and sweet clover, ivy, pink honey-suckie, privet, some soy beans and scattered flowers. Some of my combs are dark and the honey is dark and reddish. Should I melt all the dark combs and replace with foundation or scrape them off to the midrib so the bees can draw out new comb?

H. C. Achtenhagen, Illinois

Dark combs do not darken honey and you would be disappointed with the result you got from melting up your dark combs or cutting them down to the midrib. Your main difficulty is the slow flows you get after the white Dutch clover, alsike and sweet clover flows. In other words, the dark color comes from your minor honey sources like privet. The best solution would be to take off the bulk of your honey at the time of the close of the clover flows and before the ivy and other minor flows darken your honey. This may be difficult because of the overlapping of the flows, but it looks like the only solution.

What is the value of safflower for bees?

J. H. Sturdevant, Nebraska

We are very much in the dark about the value of safflower for bees. In the test garden the bees worked it heavily and apparently were getting good loads of nectar. From California comes a report of a heavy yield of both nectar and pollen from this source. On the other hand, a field of safflower in bloom in western Washington last year failed to show any bees on the flowers. A local beekeeper said that his bees paid no attention to it. A similar report comes from a Nebraska beeman located near a big field.

We need a lot more information before we can tell what to expect. It evidently is a temperamental plant which yields heavily at times and at others not at all. It is highly important to the beekeeper to find out what conditions favor nectar secretion in view of the increased acreage of safflower planted in the West.

Here in central Wisconsin I lost four colonies out of six this past winter. Neighboring beekeepers also have heavy losses. The loss was caused by a cold snap about the the middle of March although honey and pollen were left in the hive. What would be a practical way to winter these bees?

Dale Drachley, Wisconsin

It is very important to have a top entrance. We put one in the handhold of both bodies and close the lower entrance to a space one bee space high and 3 inches wide.

We think the chief cause of winter loss is starvation. Bees should be fed in the spring as early as possible. Honey must be where the bees can reach it when they are immobilized by cold weather; the cluster must be in contact with the honey. Usually the honey is most accessible just over the bees. But bees can starve with plenty of honey

If the bees have not yet entered the second hive body full of honey when winter starts they may not be able to pass over the top bar and the space between the two bodies and get to the honey above. If there were some way to fix it so that the winter cluster starts out at the base of the abundance of honey in the top body, they should withstand the cold weather, provided there is opportunity for moisture to escape.

BESSONET'S "GULF BREEZE" ITALIANS

There is no substitute for productive stock. We invite you to compare "GULF BREEZE" with any on the market so you will be convinced that our stock will really produce.

Prices: 1-24 . . . 80c each - 25 or more . . . 75c each air mailed.

BESSONET BEE COMPANY, Donaldsonville, Louisiana

OUEENS

YORK'S QUALITY BRED ITALIAN QUEENS

The Strain that Leading Honey Producers Prefer 1-24-\$1.00 each 25-99-85c each 100 up-75c each

None better regardless of price

YORK BEE COMPANY Jesup, Ga., U.S.A.

(The Universal Apiaries)



NEW

Control Box Model of the Macy Electric Uncapping Knife Ask for Wo. 102 Model - Price \$16.00

HUTCHISON MFG. CO.

2008 S. Sepulveda Blvd. Los Angeles 25, Calif.

LOOK-OUR 30TH YEAR!

To supply Merrill's quality bees and queens. Italians only with 100% Satisfaction

Summer Prices

\$2.00 2.50 Tested Queens

Empty equipment needs to be used, fill it with package bees

MERRILL BEE COMPANY

State Line, Mississippi

QUEENS

QUEENS

QUEENS

ITALIANS \$.50 each Airmail

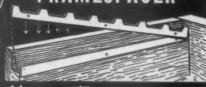
E. J. Bordelon Apiaries Moreauville, La. Box 33

OLLER Slip on FRAMESPACER

LESS WORK

MORE PROFITS

Now used everywhere as essential equipment. Sixteen styles to fit any standard frame. Write for details, prices.



STOLLER Honey Farms

ONCE AGAIN, JENSEN'S "RIGHT NOW SERVICE" ON QUEENS

We are aware that delay means disappointment, and inconvenience, but there are times when orders exceed our supply, temporarily. We try to anticipate our sales potentiality, but this season has surpassed our expectations in volume, and we have found ourselves short in spite of increased output. There is satisfaction in knowing one's products are desired by the trade, and we look with confidence to the future possibilities of beekeeping.



Your Choice of Two Outstanding Strains.

"Magnolia State" Italians Our Old Reliables Dadant's Stock Starline Hybrids, D.R. A Development of Merit

1-24		\$1.00	 \$1.25
25-99		.90	 1.15
100-u	P	.80	 1.05

Clipped and Marked Free



Jensen's Apiaries, Macon, Miss.

"The Business Quality and Service Built."

AUGUST LOTZ COMPANY

Boyd, Wisconsin

Manufacturers

of

The LOTZ SECTION

No finer section made for producing fast selling comb honey.

We also have a complete line of supplies and containers—

Cartons and Cellophane Wrappers

Queenline and Economy Style Glass Jars

Five and Ten Pound Pails Sixty Pound Cans

- Prices Right -

How-to-do-it

Safe and Simple Queen Introduction . . .

It is best to remove the old queen the day before. If you remove her sooner be sure there are no queen cells started. However, in most cases you can introduce the new queen at the same time you remove the old one. In this case I kill the old queen and drop her back into the hive so the bees will immediately know they are queenless.

Next take the tray of an ordinary penny match box and with a small nail punch two holes in either side. If you are introducing a shipped queen and she is not clipped take her inside some place just for safety, clip her and return to cage. Go to your colony to be requeened and shake or brush the bees from a frame of open brood. Smoke one side of the frame free of bees, dump your queen onto it and put her under the match tray. If you can get the tray over a few empty cells all the better; you can place the tray any place on the comb you desire by gently sliding it along, but keep the queen under it. Be sure there are no bees in with her unless it's a baby bee just emerged. When you get the tray over the desired spot push it slightly into the comb and put frame back into hive and up tight against opposite frame to hold match box tray more securely in place. In a few hours your queen will be out laying.

If you are requeening from a queen rearing nucleus of standard frame in your own yard you can use the frame you find the queen on, following the same plan as above. After you get the queen under the tray, brush most of the bees from the frame and just trade places with a frame from the colony to be requeened. In the latter case it is not necessary to clip the queen as she will probably not attempt to fly away if you are careful.

If you have good queens you will find this simple, inexpensive plan just about perfect.

L. R. Stewart, Indiana

Use Surplus Equipment . . .

Sometimes a beekeeper purchases more equipment than he needs in anticipation of increases. When I did this I decided to put everything to use as much as possible, although there would be very little honey to sell. New foundation was put in the extra hive bodies and supers and they were placed on the hives to be drawn into comb. They were removed before any honey was put in the cells, and stored with protection from wax moth.

Whenever I get a swarm, the bees are put in a box overnight while one of the hives in storage is aired and made ready for them. The drawn comb gives the bees a good start and the queen can begin to lay immediately. This is fine for hiving packages, also.

Billie M. Denning, Ohio

Pail Opener

A shoe spoon or shoehorn is a valuable tool in the honey house, being strong and made of steel. Its curved construction is safe for the fingers compared to a knife or hive tool. It fits nicely into the hand and its thin edge gets between the cover and pail of a honey container easily. It is also good for a feeder.

Bruno Racine, Quebec, Canada

Hot Weather Escape Board . . .

To take off honey for our own use during hot weather I devised a better escape board. Because it is so hot, there is not enough air space when one bee escape is used and it will become clogged with dead bees. So I drilled nine other holes, equally spaced, in the escape board. They are the same size as the manufactured one. When this board is used there are no longer any dead bees and the colony has plenty of ventilation. A screen with several escapes would be better yet as it would provide more ventilation.

Billie M. Denning, Ohio

Hive Protection . . .

In addition to the elevation afforded by our hive stands, further protection from skunks is provided by nailing a 24-inch width of 2-inch poultry netting to the stand immediately below the hive entrance, then raising it up in front of the hive, allowing it to belly out and up to a position near the front end of the hive cover where it is held taut and tacked to braces at either end of the hive stand. In summer, the wire can be detached at the end braces to allow adequate mowing of weeds.

If an electric fence is strung around the apiary to repel stray cattle, a second wire may be placed about 2 inches in front of the hive stands just below the entrances. This wire can be charged from the same battery as the fence and will be an effective skunk repellent.

H. L. Maxwell, Virginia

For Red Ants . . .

"Killer Chalk" (a ten per cent DDT product) is effective in keeping small red ants out of the hive. Just draw a heavy chalk line completely around the support on which the hive bottom rests.

Bees in the Brickwork . . .

I devised a method to remove bees from a brick wall when I was unable to smoke them out or even kill them with sulphur fumes.

The swarm had entered through a poorly fitted screen in the basement window of a church and had moved upward through a crack between the walls. I used a tube fastened to a tire pump to pump Chlorox into the brood nest. In an hour or two the queen and all bees able to move were out of the nest and had crawled through a cone into a bee package. The Chlorox is not as dangerous to use as carbolic acid or cyanide gras.

H. P. Warhurst, Oklahoma

No Paste Needed . . .

Here is an idea that I found very useful. Instead of using messy paste to attach labels to glass jars, I use a short strip of Scotch tape across the center of the label. This will work on any except a flat surface. The label cannot curl.

Roy L. Gale, Vermont

WICHT PACKAGE BEES AND QUEENS

3-Way Italian Hybrid Combination— High Production

Resistance to A.F.B.
Uniform Colony
Performance



Stock of Dadant & Sons Reared Under Ideal Conditions

 Quantity
 Starline Queens

 1.94
 51.20
 33.50

 25.99
 1.16
 3

 100.000
 1.00
 3

 For additional boss add \$1.00 per 1b.
 3

Wicht Reliable 3-Banded Italians

Lower Prices - For our own reliable 3-Banded Italian Queens and Packages with Queens, deduct 25c each from the above price schedule.

Prices of Our 3-Banded Italian Queens 1-94 950 25-99 900 100 up 750

All queens are clipped and marked unless requested not to.

WIGHT APIARIES

406 Miller St. -:- Hattlesburg, Miss.
SERVICE QUALITY DEPENDABILITY

HONEY BEESWAX SUPPLIES

SUPERIOR HONEY COMPANY

FOUNDED FOR THE BEEKEEP-ING INDUSTRY OF THE WESTERN UNITED STATES.

- A MARKETING OUTLET FOR ALL TYPES OF YOUR HONEY.
- A MARKETING OUTLET FOR YOUR BEESWAX.
- A SOURCE FOR YOUR SUPPLIES AND EQUIPMENT.

We are in business to serve you.

Visit our plants.

Ogden, Utah; Idaho Falls, Idaho; Denver, Colorado; Los Angeles, California; Phoenix, Arizona; and our Wood Goods Mill in Madera, California.

YOUR CHOICE of Three Outstanding Breeds

THE BEST TO BE HAD AT ANY PRICE.

REGULAR ITALIANS:

Our regular stock, bred for high honey produc-tion. will not swarm unless neglected. Positively

CAUCASIAN:

We are using the best breeding stock to be had in America. These bees are grey in color and very gentle. Heavy producers. Italian Qu

RICH HONEY FARMS

PRICES:

producsitively

Reg. U.S.

Pat. Off.

Pat.

Ieanerette, Louisiana



LADYLIKE mountain gray Caucasian bees

Produced over a two hundred pound average in a 1,000 colony outfit during 1950.

They will produce record crops for you if properly handled.

Our circular, "How to Handle Caucasian Bees," is free on request. Select untested Caucasian queens 75c each after June first.

Health certificate with each shipment.

CAUCASIAN APIARIES

Castleberry, Ala.



KELLEY-"The Bee Man"

IMPROVED KELLEYS ISLAND HYBRID STOCK

While these queens and their bees appear to be pure bred 3-banded Italians and are very gentle, they are exceptionally heavy layers and have other desired characteristics.

Each by Prepaid Air Mail from Paducah

Lots of 25 and more, 65c each.

THE WALTER T. KELLEY CO. Box 210, Paducah, Ku.

Italian

SUNKIST

Kelleys Island

Top quality with full guarantee. Specify Italian or Kelleys Island. Queens clipped, airmailed and postpaid.

Packages with queens F.O.B.

2-lb. w/queen _____\$2.50 3-ib. w/queen _____ 3.40 4-lb. w/queen _____ 4.30

SUNKIST BEE COMPANY

Convent, Louisiana

QUEENS, EACH:

650

PACKAGE BEES QUEENS

JACKSON APIARIES Punston, Georgia

KOEHNEN'S

Package Bees and Oueens For Quality and Service

KOEHNEN'S APIARIES GLENN, CALIFORNIA

Treat Your Hives With



STOPS ROT

Applied by brush, spray or dip to the bare wood. Cuprinol will greatly lengthen the life of your hives by stopping rot. May be painted over. Does not offend bees. At hardware, paint and lum-ber dealers or direct. \$4.70 gal.; \$1.75 qt. Check or money order. No C.O.D.'s

CUPRINOL Division, Darworth Inc. 61 Maple St. Simsbury, Conn.

ITALIAN PACKAGE BEES and QUEENS

John S. Shackelford Rio Oso, California

WESTERN CANADA BEEKEEPER
Subscription \$1.50 per year, \$2.25 two
years, \$3.00 three years. In combination
with American Bee Journal \$2.50 per year,
with American Bee Journal \$2.50 per year,
keeping and all the news about Canada
and Canada and the news about Canada
and Canada markets. You cannot afford
to be without the most up-to-date information in these days of great changes.
Sample copy free. Address WESTIEN
CANADA BEIKEREPIS, \$11 Afficek Building, Winnipeg, Manitobs, Canada.

This is the Month

by Frank E. McLaughlin

In company with Mr. and Mrs. H. J. Schaffer, my wife and I visited some of their bees this spring. They have a very nice location with a little brook running beside the apiary which is isolated from the highways. It is a lovely spot in which to meditate and watch the bees work. Mr. Schaffer is vice-president of our Western Missouri Beekeepers' Association, and Mrs. Schaffer is secretary-treasurer. She really has her hands full helping in the bee yard, assisting Mr. Schaffer with his business, working at home and with the beekeepers' association.

When the perspiration starts dripping from your chin onto your bee veil, boy, it's hot. The bees always seem to find where the perspiration-soaked clothing sticks tightest to the skin. But why gripe, this is the kind of weather we need. My queen rearing nuclei yard has been doing fine this season. My luck wasn't too good early in the spring during the cold rainy weather, but after it warmed up, I had some very nice queens.

In our area, the bees' impulse to swarm is about over for this season. Swarming doesn't occur very often after the main honeyflow has stopped. Here in the Midwest the worst swarming season usually is from May through June, weather being right. Although the swarming season is about over, don't forget that the bees can still swarm and will, under crowded conditions in the hive during the hot months. I have even seen bees swarm in September and October. Remember to give the bees some ventilation these hot months. It is very essential and some shade helps too.

At this time beekeepers can usually estimate how much surplus honey crop they will have. I hope everyone has a bumper crop. Of course in some localities beekeepers can depend on a fall crop as well.

Several readers have asked when honey should be taken off or how long they should leave honey on the bees to be well cured. The frames of honey should be at least threefourths capped over and it is better if they are completely capped. If taken too early, honey may ferment. Care should be taken to store it in a dry place until extracting time. Honey will absorb moisture and start fermenting if stored in a damp place. The supers of honey should be kept covered to prevent insects, bugs, and wax moth millers from getting to it. If extracted, honey may be stored in metal or glass containers, and if drawn combs are scarce, the combs can be put back on the bees to receive the fall crop.

Although honey should not be taken off too soon, on the other hand it should not be left on through the fall honeyflow. Early honey is milder, and is light in color, compared to fall honey. The bees shouldn't be allowed to put dark honey in the combs with the light honey. When extracted it would darken all the honey. Some people prefer light and some prefer dark honey, so by extracting at the proper time the beekeeper can keep them separated and better satisfy the customer's taste.

I purchased a few more Starline hybrid disease resistant queens this spring, and introduced them in some of my colonies. I have had several colonies of these hybrids since last spring and like them very much. Some beekeepers believe that because bees are disease resistant they are a cross type of bee. This did seem the case with early experiences when breeding for disease resistance first started. But that is not the case with the Starline hybrids. They have been very gentle. When the hive is opened and a few puffs of smoke given them, they work very nicely. They cling to the combs all through inspection, and are not flighty.

Our Western Missouri Beekeepers Association is having a picnic and basket lunch in August at Swope Park. We expect a number of guests as well as our own members and hope to have some good speakers. Everyone seems to enjoy these informal get-togethers for a day of recreation as well as business. Our Ladies Auxiliary is having another

bake sale in August. The one last year gave fine results. This is a suggestion for other auxiliaries to help the treasury as well as advertise honey cookery which results in more honey sales.

I was sincerely sorry to hear of Frank Pellett's passing. He was a very well-liked person among beekeepers. I enjoyed visiting with him when he spoke at our meetings. He did much for the field of beekeeping, and the beekeepers have lost a sincere friend.

If I can personally answer any of your bee problems, write me in care of American Bee Journal. I am always happy to receive letters.

Bees Boost Cantaloup Crop (U.S.D.A. Release, May 6, 1951)

Bees are good workers for the cantaloup grower and earn a good wage. This was indicated, says the U.S. Department of Agriculture, in an experiment in the Sait River Valley in Arizons where the Bureau of Entomology and Plant Quarantine experimented in a large commercial field of meions.

The grower and his neighbors had a fairly adequate number of bee colonies in the vicinity, and their vines set a good commercial crop. But in a cage experiment, the bee specialists created a heavy bee service for pollination. The result was an increase of nearly 30 per cent in the number of marketable meions. This was equivalent to an increase of about 60 crates of melons to the acre.

The Production and Marketing Administration records show that the average price of melons at the nearby Phoenix market was about \$3 a crate, allowing a credit of about \$150 an acre for the services of the introduced bees.

Native bees, thrips, moths, and beetles were of no value as pollinators. Plenty of bees in the cantaloup field early in the season will aid the grower to get an increase in yield from the production costs that are about the same whether the crop is light or heavy.

Cantaloup flowers are not highly attractive to bees, and if flowering weeds are in bloom, it might pay to mow these and so keep the bees on the job among the cantaloups.



Wise-Woodmanize with Your Bee Supplies"

A. G. Woodman Co. (Send for Catalog-350 Listings) Grand Rapids 4. Mich.

CAUCASIANS UNLIMITED

Will be available throughout the summer. Order from this schedule and save time. Prices effective June 1st for the balance of the season.

> 1 to 11 at \$1.00 each 12 to 49 at .90 each 50 to 99 at .80 each 100 or more .75 each

THOS. S. DAVIS

Route 7, Box 3914

Sacramento, California

BEES and QUEENS

Send for FREE Circulars

Booking orders now.

Over 30 years a shipper.

Blue Bonnet Apiaries

Weslaco, Texas

Bogenschutz Bros. Honey Uncapper



Model 11

LABOR and MONEY SAVER TIME SAVER

Modernize Your Honey House Operations! Uncapping Need not be a Bottleneck!

This machine uncaps nine frames per minute which adds up to 4,320 frames in an eight-hour day.

So Simple a Child Can Operate It. Write Today for Complete Details

G-BEE COMPANY

Sole Distributors

331 Union Building Syracuse, New York

CANADIAN BEE JOURNAL

Canadian beekeepers have much in common with their neighbors in the U.S. If you are interested in bee activities "Morth of the Border," send us your subscription Border, I.75 per year in U.S.A.

Canadian Bee Journal 54 Bloor St. West. Toronto 5, Ontario

THOSE GOOD DARK ITALIAN OUEENS

26 to 49 _____ .90 each 50 and above ____ .80 each

QUALITY and SERVICE

WEAVER APIARIES

Navasota, Texas

Dadant's for Honey Labels -Send for complete catalog

THIRTY-SECOND ASSEMBLY WITH

DADANT'S Gilt-4-Edge Foundation and **LEWIS Nailless Top Bar Frame**

Goodbye Bench Work!

There is no wedge to nail in the Lewis Nailless Top Bar Frame and only two nails to use in bored holes in the ends of the bottom bar. Then snap a sheet of Dadant's Gilt-4-Edge Foundation into the frame and you are done-in less than a minute—no wiring—no embedding. Sample sheet and frame, 25 cents.

The Lewis Nailless Top Bar Frame fits any foundation and Dadant's Gilt-3-Edge Foundation fits any frames with slotted bottom bar, with wedge in the top bar.

All Around The Bee Yard

by G. H. Cale

Will somebody tell me how the government can select certain honeys they don't consider table grade and put a support price on them below our legal percentage of parity?

I can't see any grateful hearts in the capitol bunch. We sort of pestered them, so they keep us "happy" by giving us the least they can. I see no reason why good grades of honey should not be supported at 12 cents as well as 10.1 cents. Every buyer knows he's competing with the government. He can buy often at no more than the government price. Then he may have to pay more to get the choice lots he wants. But he doesn't dare underbid Uncle Sam. Or else.

Tin cans! Once more honey is begging for containers, particularly bulk sizes. Not enough tin to go around. Or are beer cans more profitable? Also we hear that a world cartel is holding up tin prices to make a few men rich. Used honey cans this year may be very acceptable if they are decent. Often they are no good at all.

I never ran into a bulk package that has such a rough time as the sixty-pound can. At the end of a single use it may be so battered as to be like a drunk in the gutter. It may be so rusty that the surface rubs off on your pants. Why not be more careful? It might pay.

Looks to me as though the skilled comb honey producer is a self-made man. I have been trying to convert for a fair share of bulk comb for three years and find that I am not able to do it in part from lack of time and from lack of the right equipment and the right location. As for quality section comb honey I find myself at a distance bowing to the lads who know how to do a good job at producing it. My, oh my, the

conversion of a soup hound to a deluxe boy is a path with many pitfalls.

Nobody has asked me to pollinate anything this year. I'm really disap-pointed. By this time six farmers had begged me for bees. No shares; just a location. No dice. For a deal like that I'll go where the honey "flows." If we here in the Midwest can find out how to get real seed yield from red clover we will then hit the pollen trail. But we don't know too much about it. I know one man who tried a community plan last year an'd made a profit from seed shares but I wonder how long he can repeat the community idea.

I have been censured for looking down at pollination. I don't look down at it. I am looking up at it and hoping. If I were in vetch country, or reseeding crimson clover or irrigation alfalfa, or large Ladino areas, I would certainly seriously consider conversion to pollination. But it takes a seed growing tie-up with such crops to make the picture of commercial pollination look satisfying. Some of the boys in those places are really doing well.

One of the boys doing our Starline breeding work here asked me if I knew where he could get some wellmatured brood combs with American foulbrood. In astonishment I found myself telling him that in about 2000 colonies we had found three cases this year and they had been disposed of! What a difference from the time when it was usual, under the best care, to have from 2 per cent to 10 per cent of ABF a year. The use of good resistant stock and preventive sulfa feed has just about knocked this trouble out of the window as far as our operations

The incidence of Nosema in bees and queens from the South gets more serious, it seems to me, each year. Several lots of early queens showed dead attendants on arrival. Examination under the microscope showed they were badly infested with Nosema. The queens often dled as well as the attendants. Shipments later in the season from the same people arrived in good condition with no trace of Nosema. It is serious for the breeders and some work should be done on finding ways to alleviate this threat.

The story this month, by the editor of "Popular Dogs," reminds me of our black cocker who got dumpy and lost his shine but returned with a bounce when he got some honey. Also some kitty cats like it. I read where goats profit from a honey diet, especially the kids.

What is the matter with us? research man for the baking indus try told us at a Federation meetin that there were many undiscovere uses for honey, but that we expec the other fellow to do our research job for us and then ask us for train loads of honey. The now famou "Hadacol" has honey in every bottle and since many dollars are being spent advertising this vitamin product, honey naturally benefits. One breeder I know seriously considers quitting the production of package bees and queens for the production of honey for "Hadacol."

Now don't jump through that net. Let's see what we can do as an industry, as Hansen said in the June issue, to solve some of the honey utilization problems and then concentrate on getting others to make use of what we find out. Let's not wait for the other fellow to do it for us.



MILLER REARED-DADANT STARLINE HYBRID QUEENS

A New Line of Resistant Bees
BRED IN ISOLATED YARDS
Starline Queens 1-24, 61.9; 35-99, 81.15; 100 up, 8
Italian Queens 1-24, 95c; 25-99, 80c; 100 up,

JOHN G. MILLER, 723 6th St., Corpus Christi, Texas



FRAME-GRIP - SEND NOW!

This light modern tool is for easy hand-ling and removal of frames from the bee hive. Orders promptly filled—Satisfaction guaranteed. \$3.00 plus 18c postage fee.

McCORD MFG. CO.

Rt. 2, Box 886, San Jose, California

Northern California ITALIAN PACKAGE BEES AND QUEENS

2-1b. pkg. w. q. 83.75 3-1b. pkg. w. q. 4.65 1-10 11-24 Extra queens 1.30 1.10 1.00 10% books the order. Balance 10 days before shipping date.

HOMER E. PARK

PALO CEDRO, SHASTA COUNTY, CALIFORNIA

Dadant's Foundation For Bulk Comb Honey

A special, light colored foundation, somewhat heavier than this super, but lower in price. White, beautiful comb honey packed in glass and surrounded with a fine grade of liquid honey is a package that customers just want to buy.

DADANT & SONS, Inc.

Italians

QUEENS Package Bees

M. C. WEST DAVIS, CALIFORNIA

ITALIAN PACKAGE BEES AND QUEENS

B. J. Bordelon Apiaries MOREAUVILLE, LOUISIANA

Knight's Three-Banded Leather Colored ITALIAN QUEENS 75c each, any number — Shipped via Air Mail No Charge for Clipping Safe Arrival —:— Your Satisfaction Guaranteed JOHN T. KNIGHT Hayneville, Ala.

Dovetailing Machine

FOR MAKING BEE MIVES AND SUPERS. NOW A SIZE FOR EVERY BEEKEEPER'S SHOP. DETAILS ON REQUEST.

Carl E. Johnson Co.

1557 GREGORY AVENUE LINCOLN PARK 25, MICHIGAN

THRIFTY QUEENS

3-Banded Italians Only

Lots of 100, \$50.00 Smaller lots, 60c each

REMEMBER-THRIFTY BEES are GUARANTEED to PLEASE.

W.J. FOREHAND & SONS

FORT DEPOSIT, ALABAMA Breeders Since 1892



ITALIAN QUEENS—PACKAGE BEES 1 to 49 ... \$3.50 50 to 99 \$3.25 4.25 100 and up

Packages are shipped with full liberal over-weight and live arrival guaranteed. Our dealings with you must be 100% satisfactory. Replacement or refund on any shipment when bad order receipt is received by us. Our queens are second to none in performance. Queens clipped on request and sent airmail postpaid.

GEO. A. HUMMER & SONS

Established 1892 Western Union-Macon, Miss. Prairie Point, Miss.

ITALIAN PACKAGE BEES&QUEENS

for 1951 Write for Prices GIRARDEAU APIARIES Tifton, Georgia

BRITISH BEE JOURNAL THE ONLY WEEKLY BEE JOURNAL IN THE WORLD

Subscription \$4.00 per annum payable in advance Resp up to Date in Beekseping by taking out a subscription now through our agents:

AMERICAN BEE JOURNAL

CHARLES CONTRACTOR CON This Is Langstroth's Centennial Year

"The Hive and the Honey Bee" is the modernized reworking of the book he started many years ago and which ran through edition after edi-tion. It is the basic how-to-do-book book of today, with sixteen collabor-ating authors, 550 profusely illus-trated pages. \$4.00 postpaid.

American Bee Journal Hamilton, Illinois THE PARTY OF THE P

WANTED Thousands of Rabbits and other Small Stock.
Poultry and Birds. Let

Standard Rabbit & Pet Journal

Bring you the Monthly News of Babbit, Cavy, Small Stock, Poultry, Birds and Other Pets.

STANDARD RABBIT & PET JOURNAL Milton, Pa.

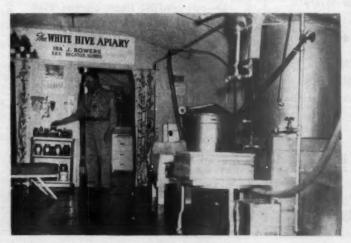
Advertise in the American Bee Journal

Visitors from Cornell University



Ira J. Bowers, owner of the White Hive Apiary and Illinois deputy bee inspector, sends us these pictures. Above is an informal snap of the group of visitors from Cornell University who stopped to see him on March 29. In the front row from left to right are: Walter Barth, honey candy; Herbert R. Pallesen, honey processing and packing; George P. Georghion, Famagusta, Cyprus, bee breeding and general beekeeping. Back row, left to right: Ira J. Bowers; Dr. E. J. Dyce, Prof. of Apiculture; Dr. Frank R. Shaw, bee poisoning and pollination; Dr. William L. Coggshall, beeswax and pollination; Roger A. Morse, honey and honey wines; Carl E. Killion, Chief Inspector for the State of Illinois. Dr. E. J. Dyce and Bowers say good strained honey is up. Carl Killion, "comb specialist," says "soup" honey is down.

The picture below shows part of Ira's packing room. Work shop in the rear through the draped doors is where honey is unloaded, cleaned and dehumidified, and extracted. In the foreground is the melting tank. At the other side of the building (not shown) is the labeling and packing department. Ira has stainless steel equipment and a packing plant to be proud of.



What's Going On

(Continued from Page 277)

ON TO BRITIAN

A nice folder and brochure of the International Beekeepers' Congress to be held at Leamington Spa in England is on our desk. The meeting is to be held September 3 to 8.

The folder is issued by the United World Travel Service at 43 W. 56th Street in New York City. Their advertised tour contemplates leaving New York on August 22 and includes England, Scotland, Holland, Belgium, Luxemburg, Switzerland, Italy, and France. The complete tour would extend from August 22 to October 11. We suggest that any of our readers who are interested contact the tour bureau as mentioned above.

New Jersey Beekeepers' Assoc. New Brunswick, July 21

10 a.m., Saturday, July 21, 1951.

Log Cabin, Experiment Station, New Brunswick, New Jersey.

Meeting called to order, and Mr. Robert S. Filmer will introduce our speaker of the morning, Dr. Stacy Randle, State Chemist.

There will be a message from De W. S. Martin, Dean and Directo of the Station and also from Dr. B. B. Pepper of the Entomological Department. Dr. Marion Crawfor will be on hand to identify you honey plants, so bring them in and find the proper and common name of the plants in your area.

Lunch:

Big item at any bee meeting. Afternoon:

Discussions of bees and beekeep ing suggestions-also "Stump th Experts." Bring your puzzling questions.

M. H. Stricker, Sec'y

Westchester Co. Beekeepers Assoc. Darian, Conn., July 15

The Westchester County Beekeepers Association will hold their regular monthly meeting on Sunday, July 15th at 2:30 p.m., at the home of Mr. and Mrs. Fortuna Piasentini. 96 Hoyt Street, Darian, Connecticut.

A guest speaker is expected to be present to give a talk on research in beekeeping.

Weather permitting the meeting will be held outdoors.

A. M. Barnes, Publicity

Package Bees and Queens

Quality Three-Banded Italians

Prices: 2-lb.w.q. 3-lb.w.q. 4-lb.w.q. Queens 1-24 \$3.00 \$3.90 \$4.80 750 25.00 2.75 3.60 4.50 70c 3.30



4.20 For packages with Dadant's Starline Hybrid queens 25c per package.

For prices on larger quantity write or wire.



100-up 2.50

Dadant's Starline Hybrids are Genuine Disease Resistant Queens.

A combination is made by artificial matings of the queen and drone mothers to insure uniformity of performance and to maintain the lines in a pure state

1-24-\$1.20; 25-99-\$1.10; 100 up-\$1.00

No extra charges for clipping, painting or Air Mailing.

GARON BEE COMPANY

Donaldsonville, Louisiana, U.S.A. in a commence of the commence

A GOOD INVESTMENT **INSURES GREATER PROFITS**

An investment of one cent will bring to you our 1951 catalog. Compare prices and merchandise before you invest in additional supplies for your apiary or honey house.

HONEY SECTIONS HIVES

All manufactured in our plant here in Marshfield. Made from select materials, and good workmanship together with prompt service to make your investment a wise one.

MARSHFIELD MFG. CO.

(Heart of Wisconsin's Dairyland)

MARSHFIELD, WISCONSIN

OUEENS

Our Package Season is about over and we have plenty of Good Queens ready for shipment. Send us your order, either large or small. See what Good Quality and Prompt Service you will receive.

ITALIANS CAUCASIANS ITALIAN HYBRIDS

PRICES

			E. 12	,	
In Lots	Queens	2-lb.	3-lb.	4-lb.	5-lb.
Of:	Each	w. q.	w. q.	w. q.	w. q.
1 -24	\$.75	\$3.00	\$3.85	\$4.70	\$5.55
25 -90	.70	2.75	3.55	4.35	5.15
100-Up	.60	2.50	3.25	4.00	4.75

Tested Queens, 75c each extra

stpaid, Airmailed and/or Clipped—No Extra Cost Queenless Package Deduct Price of Queen Packages P.O.B. Shipping Points

THE STOVER APIARIES

Mayhew, Mississippi

3-WAY HYBRID OUEENS

Requeen your colonies with the queens developed on Kellevs Island, Ohio.

We have recently received new breeder queens and plan to have queens available all Fall.

Do not confuse these queens with other Hybrids. Specify Kelleys Island 3-Way Hybrids.

Prices for balance of season - 3-Way Hybrid or Regular stock postpaid.

> \$1.00 each 26-100 .90 100 up .85

We wish to thank our many customers for the nice business given us this spring. If you were pleased tell others, if not tell us. It is our desire to please.

ROSSMAN & LONG

P. O. Box 133

Market News

by M. G. Dadant

Early backward weather has militated against accurate reports of honey yields up to mid-June. In California generally the orange flow has been below average so it is doubtful if this crop will equal 1950. Central and southern California are short in rainfall and the amount of irrigation water available for summer will probably be below normal.

In Florida, the orange flow has been good though probably not up to the heavy flow of last year. Throughout the South most of the tardiness of the flows has been made up and colonies are gathering a nice amount of surplus. Queen breeders have been reporting difficulty in keeping mating nuclei and cell building colonies free of heavy nectar.

The vetch flow in Texas and surrounding states has been all that could be desired, shortened a little at the start by cool, dry weather. Some reports indicate that buyers from farther east below the Mason-Dixon line are active in Texas attempting to buy the new bulk comb honey crop just coming off.

Along the Atlantic coast, conditions have not been so good. In many spots tulip poplar was a failure and later crops only average.

Throughout the whole northern area cool and wet weather has been against any heavy surplus from white Dutch clover. This little plant is superabundant throughout the whole region and the lack of warm, clear weather appears to be the only deterrent to more than average posibilities through late June and July.

In the intermountain territory, bees are building up satisfactorily though late. Irrigation water is no more than sufficient to supply the season's needs.

Prospects

Prospects are for only an average or below average crop in California. In the Northwest, plants are in better than average condition with

plenty of moisture. Idaho, Montana and Utah appear to be best situated for good flows in the intermountain area. Sweet clover looks abundant in Texas, Oklahoma and Arkansas. So far, the intensive cotton spraying program seems to have done little damage to bee colonies.

As stated before, only inclement weather will cause difficulty from Kansas to Maine where all the clovers are in plentiful supply with the bees in fine condition to avail themselves of the nectar. Moisture is also satisfactory; in fact, overabundance of moisture should make for a fall flow.

The Canadian provinces report similar conditions with the bees well built up on earlier fruit and dandelion flows, though it was dry earlier in the western provinces.

Honey Left

The supply of honey left on hand as the new crop begins to be harvested is in far shorter supply than a year ago. In fact, most reports are that the producers are generally bare of honey, most of the remaining supply being in the hands of the packers and cooperatives, and their report is generally that only enough is on hand to maintain a steady flow to consumers until the new crop is on the packing table.

In Canada the remaining supply is even more negligible, and the strained condition of a year ago has been replaced by one of confidence.

As a result there has been more demand from Canada for package bees than a year ago, and the demand for queens from both Canada and the U. S. has been very heavy. It is apparent that colony losses are being made up, at least in part, by divisions rather than by the pur-

Honey Wanted—Cars and less than C. W. Aeppler Co., Oconomowoc, Wis.

chasing of packages. High express rates have been a contributing factor inasmuch as breeders' prices have been for the most part below other costs.

Honey Sales

There is very little to report on sales of new crop honey. The late season and difficulty of getting extracting help will mean a crop which will be delivered later than usual. Likely this is one reason why southwestern beekeepers are getting early demand for their bulk comb honey. Jobbers and retailers are out and need more immediately to supply the demand and keep the market going.

Such sales of honey as have been made have followed up the small advance in support price, which has done one thing if nothing else, and that is buoy the price and prevent early cut-price buying.

Summary

All in all, perhaps there will not be as many bees as a year ago for the crops, but most of them will be in better shape for the flow if it develops. The flow is late and delays, particularly in the clover areas, may be fatal to a good crop. But prospects seem better than average except perhaps along the east coast, in Wyoming, Colorado and Nevada, and in central and southern California.

Demand, except for chunk and bulk comb, is only fair and the price shows no tendency to boom. It can hardly break far as long as the support price holds. Beekeepers and packers have had a full year in which to get back some of those lost customers of the war years and have been doing so. While the crop may equal 1950, the markets should be as good if not better. We need more bulk comb honey with some method of preparing and packing so that the northern markets can use it regularly.

BUY AND SELL

BEES AND QUEENS

QUEENS OUR SPECIALTY—Italians, 90c each; Carniolans, \$1.25 each; Caucasian, \$1.00 each. All queens shipped by Air Mail and guaranteed to please. Walter D. Leverette, Bx. 364, Ft. Pierce, Fja.

YES, ALL COMPARISONS prove that Green's profit producing queens are the best to be had. They will please you from the brood nest to the harvesting of a great crop of honey. Backed by 22 years of breeding better queens. Price, 75c each. D. P. Green, Deland, Fla., Rt. 2. Phone 512M.

BREWER LINE-BRED Caucasian queens -1 - 24, \$1.25; 25 - 99, \$1.15; 100 up, \$1.00. Brower Bros. Aplaries, 3816 Caucasian Circle, Tampa 9, Florida.

SORRY but sold out on Carniolans until after May I. Carniolans and Italians— untested, \$1.25 each; tested, \$2.50 each. Breeders, the very best, \$5.00 each. Get prices on nuclei. Good price on truck loads. Wm. Atchley, 500 E. 9 Street, Up-land, Calif.

OUR QUEENS are Italians of the Geo. W. Moore strain, are line bred and purely mated. For the remainder of the summer our price will be 75c each, in any numbers. Hanson, Hall Bee Co., Livingston, Ala.

YANCEY HUSTLER Three-Band Italians
—Bred for business. Select queens, \$1.00
each; \$8.00 per dozen. Guaranteed to please. Caney Valley Apiaries, Bay City, Texas.

GOLDEN QUEENS—\$1.00, Airmail; 24 to 49, 90c; 50 and up, 80c. O. E. Brown, Rt. 1, Asheboro, N. C.

BRIGHT 3-BAND Italian queens, 75c; tested queens, 31.50. Health certificate with order. Luther Pickett, Manager Orange Bee Company, Efland, N. C.

THREE BANDED Italian bees and queens—Best of quality and extra good workers. 2-1b. with queen, \$3.50; 3-b. with queen, \$4.50. Select untested queens, i to 25, \$1.00 each, 25 up, 90c each, a trainorder will convince you. Phone 4705, Alamance Bee Co., Geo. E. Curtis, Mgr., Graham. N. C.

GOLDEN ITALIAN BEES AND QUEENS
—Real gentle and good workers. 2-lb.
with queen, 34.50; 3-lb. with queen, 34.50;
Select untested queens, 1 to 25, 31.00 cach;
25 up, 80c cach. Health certificate with
every order. Carolina Bee Farm, Graham,

CAUCASIAN QUEENS—One, 75c; ten or more 60c each. Tillery Brothers, Green-

FOR SALE

FOR SALE—Electro Fio Filling Machines. Designed for honey. Fills containers automatically. Write for information or see in operation. Hancock Honey House, Hancock, Iowa.

BHES FOR LEASE AND SALE—Montana, Wyoming, Idaho, Nebraska. Contact Bradshaw & Sons, Wendell, Idaho.

FOR SALE—Reversible bottom boards, 10 KD, \$10.00; 50 KD, \$47.50; 100 KD, \$90.00; 150 KD, \$90.00; 150 KD, \$90.00; 150 KD, \$90.00; 100 KD, \$90.0

BEEKEEPER'S SUPPLIES - Write for complete price list. Also special sale at regular J-3 and Dadant's thin grant J-5103, to close out stock. Roscoe F. Wix-son, Dundee, N. Y.

OVER 700 colonies, sweet clover locations, honeyflow from spring 'till fall. Home, fully equipped shop, honey packaging equipment, market, etc. Best reasonable offer. Earnest Galloway, Bancroft, Idaho.

Copy for this department must reach us not later than the tenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

East of Classified advertising—13 represents in the continuous continuo should be stated to insure that buyer is fully informed.

SEVERAL HUNDRED full depth hive bodies with combs in excellent condi-tion. Almo covers and bottoms. No foul-brood. Verne Meyer, Pipestone, Minn.

FOR SALE-55 colonies with equipment for 150. Clean, good shape. 7-room house, large lot, in small village. Good roads, locations available. In northwest-ern Illinois. Sell separately or together. Reasonable price. Write Guilford Eller, Hazelhurst, Illinois.

OR SALE—2 Root 2-frame reversible extractors, one 12-in. pockets, one 10-in. lookets. Haif book price. Parent Apiaries, Pertile. Minn.

FOR SALE—700 colonies of bees and ex-tracting equipment. 10-frame size. No disease. Darrell Sparks, Algona, Iowa.

FOR SALE—Furniture: 250 section supers . \$50. Sawed and veneer dividers. Wm. Elges, Griswold, Iowa.

FOR SALE-40 ten-frame supers for bees. In good shape. William P. Blake, West In good shape. Bend, Iowa.

SIXTY (60) colonies bees. Must be sold at a loss, with or without full equip-ment. A bargain on account of sickness George F. Metcalf, Main P. O. Box 359, Grand Rapids, Michigan.

FOR SALE—30 colonies of bees, over 80 supers, all 10-frame. 1—30-frame Root radial. All in excellent condition. State inspected. Inside of two months all supers will be filled. Van Lingen Bros., Renville, Minn.

HONEY and BEESWAX WANTED

WANTED—Extra white and light amber honey. Let us ship you the containers. Sell us your honey for CASH on delivery. The Hubbard Aplaries, Manufacturers of Bee Supplies and Comb Foundation. Bee Supplies a Onsted, Michigan.

WANTED — Extracted honey, white or light amber, in 60's. State price in first letter. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

HONEY AND WAX WANTED. Maii sample. Advise quantity. Bryant & Sawyer, 2425 Hunter St., Los Angeles, Calif.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

WANTED—All kinds and grades of honey. Sample requested. Cole Honey Co., 4460 Piedmont Ave., Oakland, Calif.

WANTED—All grades comb and extracted honey, large or small amounts. Quote price in first letter. Mail sample. King Honey Co., 4808-10-12 E. Truman Road, Kansas City, Mo.

CARLOADS or less of honey and wax. Send sample and price. Alexander Co., 819 Reynolds, Toledo, Ohio.

"BEESWAX" carloads or less. Send sample and price. Strahl & Pitsch, Inc., 141 Front Street, New York 5, N. Y.

WRITE FOR SHIPPING TAGS and current quotations on rendered beeswax. Any amount from one pound up bought. If you have 25 pounds or more, save 25% by letting us work it into foundation for you. Walter T. Kelley Co., Paducah, Kentucky.

HONEY FOR SALE

NEW CROP OF HONEY shipped daily from producer in Florida. Pure orange blossom, 5-lb. pail \$2.25. Pure Florida cut comb honey. 5-lb. pail \$2.75. No. C.O.D. orders; all shipments prepaid. E. R. Raley, Box 1610, Daytona Beach, Florida.

ANY GRADE — any amount. Alexander Company, 819 Reynolds, Toledo, Ohio.

NEW CROP GEORGIA cut comb honey in 20 os. 2½ and 5 pound jars. Ready about June first. Wholesale here or de clivered. 3000 to 4000 cases. George Bray, Nahunta, Ga.

MICHIGAN'S FINEST WHITE CLOVER HONEY, New sixties. Fully ripened and clean. You will be pleased. Sample, twen-ty cents. John McColl, Tecumseh, Michi-

IOWA HONEY—Extra white, light amber. New cans. Truck lots. Russell D. Smalley, Beaver, Iowa.

CLOVER EXTRACTED HONEY in sixties. Ralph Gamber, 910 State, Lancaster, Pa.

HONEY—Car, water white, sweet clover honey in new 60's. Parent Apiaries, Fertile, Minn.

HEAVY BODIED AMBER HONEY, 60's, one can or truck load. 10c per lb. f.o.b. Mooresville. Clyde E. Roberts, Moores-ville, Mo.

HONEY FOR SALE—New crop clover comb honey. For prices write to Craw-ford Smith, Clayville, N. Y.

FANCY GEORGIA tupelo gallberry chunk comb packed 2½ and 5-lbs. Valdosta Honey Co., Valdosta, Ga.

200 cans of clover honey for sale. Sample 25c. Chas. Miles, Duniap, Iowa.

HONEY-Light to amber, also bakers' grade. What's your offer? Peter Tangen,

SUPPLIES

BEE SUPPLIES — Lewis Woodenware — Dadant's Foundation. Send for catalog. Simeon Beiler, Intercourse, Pennsylvania.

WRITE FOR CATALOGUE. Quality bee supplies at factory prices. Prompt ship-ment. Satisfaction guaranteed. The Hub-bard Apiaries, Manufacturers of Beekeep-ers' Supplies, Onsted, Michigan.

FOR CHRYSLER all steel electric welded queen excluders in the U.S.A. write to: Prairie View Honey Co., 12303—121h St., Detroit 6, Michigan. Ask for circular E 2.

BEE SUPPLIES of all kinds. Write for free catalogue. Hodgeon Bee Supplies Limited, 565—13th Avenus, New Westmin-ster, B.C., Canada.

A 90 DAYS SPECIAL—Your wax worked into quality medium brood foundation for \$18 per pound. Reduction for large quantities. Hawley Honey Co., Iola, Kans.

YOUR WAX WORKED into quality medium brood foundation, 23c pound; 100 pounds, \$18.00. Medium brood foundation for sale, 80c pound. Fred Peterson, Alden.

THE BIGGEST BEE SUPPLY CATA-LOGUE PUBLISHED (64 pages) free for the asking. Big factory manufacturing a complete line of wooden goods, comb foundation, metal goods, veils and gloves, carloads in stock, daily shipments, save 20%, WALTER T. KELLEY CO., PADU-CAH, KENTUCKY.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices. C. W. AEPPLER COMPANY Oconomowee Wisconsin

SOUTHERN CALIFORNIA HEADQUAR-TERS for Bee Supplies. Make our facil-titles your "Trading Post." Complete stocks. See our Bulletin Beard for Budget Bargains. The Diamond Match Company, 1300 Produce St., Los Angeles 21, Calif.

THE ONLY COMB FOUNDATION PLANT in the East. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, Rt. No. 3, Auburn, New York.

FOR SALE—Filter presses, filter paper of various types for filtering honey. The Cellulo Co., Sandusky, Ohio.

POSITION AND HELP WANTED

WANTED—2 helpers for honey season.
Must be clean and have good habits.
May find employment the year around
with us. Write Ephardt Honey Farms.
Strandburg. South Dakots.

CASH IN ON SPARE TIME. Seil won-derful Regal Christmas cards exclusive with us. 25 seil for \$1.00. Also 50 for \$1.25. Over 150 other boxes. Free Samples. Kit on approval. Regal Greetings. Dept. 46, Ferndale, Michigan.

SEEDS AND TREES

HONEY PLANTS our specialty. Catalogue on request. Melvin Pellett, Atlantic, Ia.

MISCELLANEOUS

The "BEE WORLD," international and scientific journal on bees and beekeeping, with apicultural abstracta. Monthly, including membership of the Apis Club, \$1.75 per annum. Specimen copy 12c U.S. poetage stamps, from The Secretary, The Way's End, Foxton, Royston, Heris. England.

CIRCULAR—On requeening and making increase at the least possible cost. C. S. Miller, Apiculturist, Rocky Ford, Colo.

WE ARE HEADQUARTERS for orange blessom seals. Very attractive and a big help toward improving sale of your orange blossom honey. Let us send samples of our three sizes with wholesale quotations. Woodruff's, Clermont, Fiorida.

RANCH MAGAZINE—Do you find it di...cuit to accure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information of range sheep than any magazine published. Subscription \$1.00. Hotel Cactus, San Angelo, Texas.

New Book about Comb Honey

"Honey in the Comb" by Carl E. Killion \$3.00, postpaid American Bee Journal

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY Oconomowac, Wisconsin

CANS

Several Thousand **Used Gans** Just Like New

-- Also --

Brand New Cans With Large Size Openings **Packed in Cartons** of 24

in Bulk Truckloads

Carloads

Improved designs, embodying color, balance, simplicity, and distinction. Please write for free samples and prices.

C. W. AEPPLER COMPANY

Drawer 239

Oconomowoc, Wisconsin

DADANT Starline Hybrids



Are Bred for PERFORMANCE and RESISTANCE

by approved methods in isolated yards.

LOTT BEE COMPANY Baton Bouge, La.



CAUCASIANS. CARNIOLANS

Mardy, prolific, rapid build-up, best of work-ers. Cancasians have the longest on one of any race. Both build beautiful white combs. BOTH ARE THE GENTLEST OF ALL BACKS OF REES. Gentlesses is safest in towns. mear neighbors or nees saves time, sufficiently work. Frices, both races: These of the work. Frices, both races: These of the combs. L.75 each. By Air Mail.

ALBERT G. HANN Glon Gardner, New Jersey

FIVE GALLON TANKS

Made from heavy creamery tin, with ground valve faucet, inclined bottom for easy draining. Price \$3.96 each, delivered. Money refunded if not natisfied.

> M. Y. S. COMPANY BAINBRIDGE, N. Y.

Avocado Honey

Mr. Pellett asked in May issue for information on avocado honey. Avocados here produce a dark honey just about the time citrus flow is over so there is great danger in getting a darkening of the light citrus crop if it is not extracted at once. About half the citrus here is grapefruit but only orange gives honey in payable quantities.

The avocados have been a failure here for four years, as when they ripen in September or later heavy winds or hurricanes blow them all off the trees.

Previously in dry seasons black smut covered the trees and a very unpleasant honey was produced so that beekeepers always say that their honey is spoiled by the avocado

Isaac S. Diller, Miami

AD INDEX

Aeppler Co., C. W 3		
American Bee Journal 3	86,	31
American Rabbit Journal	meioxo	31
Anderson & Co., B. A.		
Australasian Beekeeper		
Barger Apiaries		29
Beekeepers Magazine	*****	29
Bessonet Bee Co.	-	30
Blue Bonnet Apiaries	0000	30
Bordelon Apiaries, B. J.		
Bordelon Aplaries, R. J.		30
British Bee Journal		30
Calvert Apiaries		29
Canadian Bee Journal	-	30
Caucasian Apiaries		30
C-Bee Co.		30
Coffey Apiaries		27
Cuprinol Div. Darworth, Inc		30
Cutts & Sons, J. M.		
Dadant & Sons, Inc.		
Inside front cover, 279, 3		
Davis, Thos. S		
Diemer Bee Co.		29
Ellison & Sons, C. G.	****	30
Forehand & Sons, W. J.		
Foster Apiaries		
Garon Bee Co		
Girardeau Apiaries	-	30
Harper, Carlus T.		27

Hazel-Atlas Glass Co	279
Head, S. J.	276
Honey Sales Co.	275
Hummer & Sons, Geo. A.	308
Hutchison Mfg. Co.	301
Jackson Apiaries	304
Jensen's Apiaries	302
Johnson Co., Carl E.	308
Kelley Co., Walter T 299,	304
Killion & Sons	
Knight, John T.	308
Koehnen's Apiaries	
Lewis Co., G. B Inside back co	over
Little Apiaries	314
Lott Bee Co.	313
Lotz Co., August	302
Marshfield Mfg. Co.	310
McCord Mfg. Co.	
Merrill Bee Co	301
Michigan Bee & Farm Supply Co	314
Miller, John G.	308
Miller & Co., Woodrow	
Mitchell's Apiaries	297
Modern Beekeeping	297
Morrison, F. E.	
Muth Co., F. W.	298
M. Y. S. Co	
Neises Co.	300
Newton Bee Co.	
Dark Homor E	900

Plant, W. E.	
Rich Honey Farms	304
Root Co., A. I. 275, Bac	k cover
Root Co. of Iowa, A. I.	276
Rossman & Long	310
Rusch & Son Co., A. H.	300
Shackelford, John S.	304
Spears' Apiaries	300
Standard Churn & Mfg. Co	314
Standard Rabbit & Pet Journal	308
Stoller Honey Farms	301
Stover Apiaries	310
Sunkist Bee Co.	304
Superior Honey Co	303
Taylor Apiaries	298
Victor Apiaries	299
Walker, Eugene	298
Weaver Apiaries	306
Weaver, Howard	299
West, M. C	308
Western Canada Beekeeper	304
White Pine Bee Farms	
Wicht Apiaries	303
Williams Brothers Mfg. Co	
Inside bac	k cover
Winslett, D. T.	300
Woodman Co., A. G.	306
York Bee Co.	301



No. 14-4-frame double duty.

STANDARD HONEY EXTRACTORS

Hand driven, smooth running. Gives rapid extraction with minimum of effort. Easy loading and unloading. Reel basket easy to remove. Adjustable flow honey gate. Extracts both frames and cappings. Easily cleaned. Weight 42 lbs. \$28.15 FOB.

Handles 12 standard, shallow or half-depth frames. Heavy gauge galvanized, formed angle reel. Completes extraction in 5 to 8 minutes. Easily loaded and unloaded. Easily cleaned. Adjustable flow honey gate. Weight 125 lbs. \$76.50 FOB factory.



STANDARD CHURN, INC.

Wapakoneta, Ohio



No. P-18-13-frame radial extractor.

American Rabbit Journal Shows the Way to Success

Gives the latest news and views of the rabbit world—an illustrated monthly magnazine of general and educational features. 1 year, \$1.00; 3 years, \$2.00; sample 15c.

American Rabbit Journal
DEPT. S. WARRINTON, MISSOURI

ROOT BEE SUPPLIES HONEY PRODUCER AND PACKER'S SUPPLIES

Michigan Bee & Farm Supply Box 7, 810 H. Cedar, Lansing, Michigan



John M. Davis Strain

ITALIAN QUEENS
1.94 94 up
81.95 \$1.00

DAUGRITHES OF ARBA
THEFTED STOCK

LITTLE APIARIES

beehives 6 to 8 degrees.



- * Your combs stand up better in a cooler hive.

See it at your nearest Lewis-Dadant Dealer.



PLASTIC NTAINER

Made from crystal clear plastic with the word "Honey" engraved on cover. This plastic container will hold one pound of extracted or comb honey.

\$13.95 per 100-POSTPAID

Postage and Insurance Paid Anywhere in the United States Terms-Cash With Order. No C.O.D.

Manufacturer of Bee Supplies "Since 1886." 45th Year in Oregon

illiams Brothers Mfg.

5205 S. E. 82 Ave.

Portland 66, Oregon

UNIVERSITY MICROFILMS 313 NORTH FIRST STREET ANN ARBOR MICHIGAN DEC 50-51

Give Your Honey a Bright New Dress!



Let Root's many styles and sizes of honey labels help you in the selling of your product. A bright attractive label is your silent salesman.

Get a Free Label Catalog From your Root Dealer

THE A. I. ROOT COMPANY

Medina, Ohio